United States Department of Agriculture

Natural
Resources
Conservation
Service

Washington
Water Supply Outlook Report
February 1, 2007

Water Supply Outlook Reports
and
Federal - State – Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Local Natural Resources Conservation Service Field Office

or

Scott Pattee
Water Supply Specialist
Natural Resources Conservation Service
2021 E. College Way, Suite 214
Mt. Vernon, WA 98273-2873
(360) 428-7684

or

Kelly Sprute
Public Affairs Specialist
Natural Resources Conservation Service
1835 Black Lake Blvd. SW, Suite D
Olympia, WA 98512-5623
(360) 704-7789

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

Washington
Water Supply Outlook

February 2007

General Outlook

With nearly 70 percent of the snow accumulation season behind us and only a couple of good months left to collect measurable amounts of snow Washington is sitting pretty good with mostly near to above average snowpack and water-year precipitation. January was a relatively dry month with very cold temperatures which brought adequate snowfall to keep everyone happy. However El Nino appears to have taken a headlock on the Pacific Northwest with a persistent high pressure system that is allowing very little precipitation to move through. These conditions are expected to continue through the rest of the month with a trend towards more normal precipitation into March and April. Temperatures are forecasted to remain above normal through out the forecast period.

Snowpack

The February 1 statewide SNOTEL readings were 120% of average, down 15% from January 1. The Pend Oreille River Basin snow surveys reported the lowest readings at 83% of average. Readings in the Nooksack River area of Whatcom County reported the highest at 159% of average. Westside averages from SNOTEL, and February 1 snow surveys, included the North Puget Sound river basins with 144% of average, the Central Puget river basins with 129%, and the Lewis-Cowlitz basins with 110% of average. Snowpack along the east slopes of the Cascade Mountains included the Yakima area with 117% and the Wenatchee area with 117%. Snowpack in the Spokane River Basin was at 89% and the Walla Walla River Basin had 92% of average. Maximum snow cover in Washington was at Jasper Pass aerial marker in the Baker River Basin, with water content of 72 inches. Last year at this time Jasper Pass had 54.7 inches of snow water. The highest average in the state was at Deer Park snow course near Port Angeles with 200% of average.

BASIN	PERCENT OF LAST YEAR	PERCENT OF AVERAGE
Spokane	89	89
Newman Lake	88	99
Pend Oreille	80	83
Okanogan	118	125
Methow	111	123
Conconully Lake	105	138
Wenatchee	102	117
Chelan	110	114
Upper Yakima	97	122
Lower Yakima	80	112
Ahtanum Creek	80	108
Walla Walla	79	92
Lower Snake	75	113
Cowlitz	87	107
Lewis	75	113
White	79	109
Green	98	110
Puyallup	86	115
Cedar	111	146
Snoqualmie	102	121
Skykomish	99	118
Skagit	124	132
Baker	141	141
Nooksack	127	159
Olympic Peninsula	159	148

Precipitation

During the month of January, the National Weather Service and Natural Resources Conservation Service climate stations reported varied precipitation totals throughout Washington river basins. The highest percent of average in the state was at Stevens Pass which reported 170% of average for a total of 23.2 inches. In contrast Sequim reported the lowest monthly total with only .11 inches or 5% of the average. The wettest spot in the state was reported at Olallie Meadows SNOTEL with a January accumulation of 23.4 inches. Most basins reported near to much below average precipitation for January. Walla Walla River Basin reported the lowest with only 54% of average for the month and Central Puget Sound had the highest with 105%.

RIVER BASIN	JANUARY PERCENT OF AVERAGE	WATER YEAR PERCENT OF AVERAGE
Spokane	75	115
Colville-Pend Oreille	68	114
Okanogan-Methow	90	122
Wenatchee-Chelan	102	131
Upper Yakima	101	127
Lower Yakima	79	134
Walla Walla	54	107
Lower Snake	61	102
Cowlitz-Lewis	60	112
White-Green-Puyallup	77	119
Central Puget Sound	105	125
North Puget Sound	98	123
Olympic Peninsula	72	111

Reservoir

Seasonal reservoir levels in Washington vary greatly due to specific watershed management practices required in preparation for irrigation season, fisheries management, power generation, municipal demands and flood control. Reservoir storage in the Yakima Basin was 475,000-acre feet, 107% of average for the Upper Reaches and 161,000-acre feet, 132% of average for Rimrock and Bumping Lakes. Storage at the Okanogan reservoirs was 99% of average for February 1. The power generation reservoirs included the following: Coeur d'Alene Lake, 61,000 acre feet, 53% of average and 26% of capacity; Chelan Lake, 409,000-acre feet, 129% of average and 60% of capacity; Skagit River reservoirs at 105% of average and 75% of capacity and the Cowlitz – Lewis reservoir systems with 2,558,000-acre feet of storage.

BASIN	PERCENT OF CAPACITY	CURRENT STORAGE AS PERCENT OF AVERAGE
Spokane	26	53
Colville-Pend Oreille	43	90
Okanogan-Methow	70	99
Wenatchee-Chelan	60	129
Upper Yakima	57	107
Lower Yakima	69	132
Lower Snake	69	110
Cowlitz-Lewis	N/A	N/A
North Puget Sound	75	105

For more information contact your local Natural Resources Conservation Service office.

Streamflow

At this time all streamflow forecasts are preliminary and subject to change per NRCS and NWS coordination agreements. Forecasts vary from 107% of average for the S.F. Walla Walla River to 67% of average for Okanogan River at Malott. April-September forecasts for some Western Washington streams include the Cedar River near Cedar Falls, 98%; White River, 99%; and Skagit River, 105%. Some Eastern Washington streams include the Yakima River near Parker, 89%: Wenatchee River at Plain, 82%; and Spokane River near Post Falls, 88%. Volumetric forecasts are developed using current, historic and average snowpack, precipitation and streamflow data collected and coordinated by organizations cooperating with NRCS. Caution should be used when using early season forecasts for critical water resource management decisions.

Statewide January streamflows were mostly all below average primarily due to colder temperatures and below average precipitation during the month. The Similkameen at Nighthawk had the highest reported flows with 99% of average. The Lewis River at Ariel with 31% of average was the lowest in the state. Other streamflows were the following percentage of average as reported by the River Forecast Center: the Cowlitz at Castle Rock, 48%; the Spokane at Spokane, 38%; the Columbia below Rock Island Dam, 58%; and the Bumping near Nile, 44%.

BASIN	PERCENT OF AVERAGE (50 PERCENT CHANCE OF EXCEEDENCE)
Spokane	86-95
Colville-Pend Oreille	94-102
Okanogan-Methow	107-137
Wenatchee-Chelan	105-121
Upper Yakima	113-117
Lower Yakima	90-119
Walla Walla	100-104
Lower Snake	78-93
Cowlitz-Lewis	90-102
White-Green-Puyallup	100-103
Central Puget Sound	107-118
North Puget Sound	105-117
Olympic Peninsula	103-110

STREAM	PERCENT OF AVERAGE JANUARY STREAMFLOWS
Pend Oreille Below Box Canyon	56
Kettle at Laurier	91
Columbia at Birchbank	78
Spokane at Long Lake	44
Similkameen at Nighthawk	99
Okanogan at Tonasket	79
Methow at Pateros	94
Chelan at Chelan	85
Wenatchee at Pashastin	68
Yakima at Cle Elum	39
Yakima at Parker	46
Naches at Naches	53
Grande Ronde at Troy	45
Snake below Lower Granite Dam	49
SF Walla Walla near Milton Freewater	36
Columbia River at The Dalles	67
Lewis at Ariel	31
Cowlitz below Mayfield Dam	48
Skagit at Concrete	55
Dungeness near Sequim	60

For more information contact your local Natural Resources Conservation Service office.

BASIN SUMMARY OF SNOW COURSE DATA

FEBRUARY 2007

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00
ABERDEEN LAKE CAN.	4000	2/01/07	22	4.9	3.8	4.7
AHTANUM R.S.	3100	1/31/07	19	5.3	7.5	7.1
ALPINE MEADOWS	3500	1/31/07	77	33.0	31.8	--
ALPINE MEADOWS SNTL	3500	2/01/07	78	38.6	37.9	29.2
ASHLEY DIVIDE	4820	1/30/07	17	3.6	5.3	5.1
BADGER PASS SNOTEL	6900	2/01/07	70	21.0	20.7	22.3
BAIRD #2	3220	1/31/07	26	5.7	7.7	--
BARKER LAKES SNOTEL	8250	2/01/07	28	8.6	9.5	9.2
BARNES CREEK CAN.	5320	1/27/07	48	12.4	12.4	14.4
BASIN CREEK SNOTEL	7180	2/01/07	24	4.6	5.8	4.9
BEAVER CREEK TRAIL	2200	1/29/07	49	17.0	11.0	10.3
BEAVER PASS	3680	1/28/07	83	31.9	27.3	19.3
BEAVER PASS SNOTEL	3680	2/01/07	100	38.9	33.3	26.2
BIG WHITE MTN CAN.	5510	1/31/07	44	12.9	5.3	13.3
BLACK PINE SNOTEL	7100	2/01/07	25	5.5	7.3	8.0
BLACKWALL PEAK CAN.	6370	2/01/07	---	30.6	21.6	23.8
BLEWETT PASS #2	4270	1/31/07	41	15.4	12.0	11.5
BLEWETT PASS#2SNOTEL	4270	2/01/07	23	18.5	15.1	12.4
BRENDA MINE CAN.	4450	2/01/07	---	13.3	11.7	8.9
BROWN TOP AM	6000	1/26/07	140	55.8	50.2	42.5
BROWNS PASS		1/26/07	22	5.2	4.3	--
BUMPING LAKE (NEW)	3400	1/31/07	58	17.9	21.0	13.3
BUMPING RIDGE SNOTEL	4600	2/01/07	72	23.9	28.7	19.4
BUNCHGRASS MDWSNOTEL	5000	2/01/07	52	16.1	24.6	18.6
BURNT MOUNTAIN PIL	4200	2/01/07	44	13.9	9.0	9.0
BUTTERMILK BUTTE	5250	1/31/07	44	15.1	15.0	--
CAYUSE PASS SNOTEL	5200	2/01/07	---	45.5	--	--
CHESSMAN RESERVOIR	6200	1/26/07	10	2.3	.4	2.5
CHEWALAH #2	4930	2/01/07	41	12.2	--	--
CHICKEN CREEK	4060	1/29/07	42	10.8	13.2	11.5
CHIWAUKUM G.S.	2500	2/01/07	36	10.5	9.6	8.6
CITY CABIN	2390	1/31/07	26	11.4	8.2	--
CLOUDY PASS AM	6500	1/31/07	83	32.4	30.0	29.5
COLD CREEK STRIP	6020	1/29/07	29	7.7	8.2	--
COLOCKUM PASS	5370	1/30/07	41	13.3	14.0	11.7
COMBINATION SNOTEL	5600	2/01/07	11	2.7	3.0	3.4
COPPER BOTTOM SNOTEL	5200	2/01/07	22	5.2	6.8	8.0
COPPER MOUNTAIN	7700	1/28/07	22	6.3	8.6	7.0
CORRAL PASS SNOTEL	6000	2/01/07	67	24.2	29.6	22.1
COUGAR MTN. SNOTEL	3200	2/01/07	38	14.6	13.8	13.7
COX VALLEY	4500	1/29/07	101	40.1	18.6	24.2
COYOTE HILL	4200	2/02/07	19	4.5	6.8	7.3
DALY CREEK SNOTEL	5780	2/01/07	26	6.2	7.8	7.4
DEER PARK	5200	1/29/07	60	24.4	7.6	12.2
DEVILS PARK	5900	1/28/07	99	39.2	30.0	30.7
DISAUTEL PASS		1/26/07	22	5.6	5.5	--
DISCOVERY BASIN	7050	1/29/07	24	5.8	6.2	6.6
DIX HILL	6400	1/28/07	23	6.0	7.6	7.6
DOCK BUTTE AM	3800	1/26/07	140	57.4	41.8	37.2
DOMMERIE FLATS	2200	1/31/07	28	7.3	8.7	6.4
DUNCAN RIDGE	5370	1/29/07	25	6.0	--	--
DUNGENESS SNOTEL	4100	2/01/07	34	11.2	4.7	5.9
EASY PASS AM	5200	1/26/07	150	60.0	51.8	46.2
ELBOW LAKE SNOTEL	3200	2/01/07	90	36.5	29.0	20.4
EMERY CREEK SNOTEL	4350	2/01/07	34	9.0	11.9	10.5
ENDERBY CAN.	5800	2/03/07	81	30.7	29.5	27.2
FISH CREEK	8000	1/29/07	23	5.8	5.9	5.8
FISH LAKE	3370	1/31/07	77	28.8	31.0	24.5
FISH LAKE SNOTEL	3370	2/01/07	72	26.6	29.0	24.7
FLATTOP MTN SNOTEL	6300	2/01/07	92	28.0	34.2	31.8
FOURTH OF JULY SUM	3200	2/01/07	34	8.0	8.5	7.1
FREEZEOUT CK. TRAIL	3500	1/28/07	38	13.0	10.0	8.8
FROHNER MDWS SNOTEL	6480	2/01/07	21	4.3	4.7	5.0
FROST MEADOWS	4630	1/30/07	54	17.9	--	--
GOAT CREEK	3600	1/30/07	23	5.4	7.3	5.1
GOLD MTN LOOKOUT		2/01/07	33	8.3	10.9	--
GRASS MOUNTAIN #2	2900	2/01/07	20	11.7	8.7	7.5
GRAVE CRK SNOTEL	4300	2/01/07	41	10.5	12.5	11.7
GREEN LAKE SNOTEL	6000	2/01/07	56	19.2	23.0	15.4
GREYBACK RES CAN.	4700	2/01/07	26	6.4	6.3	6.3
GROUSE CAMP SNOTEL	5380	2/01/07	74	18.6	22.4	14.0
HAMILTON HILL CAN.	4550	1/27/07	35	12.1	5.2	9.9
HAND CREEK SNOTEL	5030	2/01/07	30	7.2	8.6	8.6
HARTS PASS SNOTEL	6500	2/01/07	97	38.2	31.1	31.3
HARTS PASS	6500	1/26/07	106	40.0	--	29.5
HELL ROARING DIVIDE	5770	2/01/07	57	16.7	22.9	20.7
HERRIG JUNCTION	4850	1/29/07	56	17.0	19.3	18.1
HIGH RIDGE SNOTEL	4920	2/01/07	51	16.8	21.7	16.9
HOLBROOK	4530	2/01/07	21	4.5E	4.9	7.2
HOODOO BASIN SNOTEL	6050	2/01/07	74	24.6	33.2	30.1
HUCKLEBERRY SNOTEL	2000	2/01/07	7	2.8	1.7	--
HUMBOLDT GLCH SNOTEL	4250	2/01/07	---	8.5	8.0	9.5
INTERGAARD	6450	2/01/07	---	4.2E	3.6	4.8
IRENE'S CAMP	5530	1/29/07	33	8.7	9.6	--
ISINTOK LAKE CAN.	5100	1/30/07	21	4.8	4.2	5.2
JASPER PASS AM	5400	1/26/07	180	72.0	54.7	56.5
JUNE LAKE SNOTEL	3200	2/01/07	72	30.6	41.6	28.4
KELLER RIDGE	3700	1/30/07	20	4.7	4.7	--
KELLOGG PEAK	5560	1/30/07	59	21.4	23.4	20.7
KLESILKWA CAN.	3450	1/27/07	41	14.8	--	7.1
KRAFT CREEK SNOTEL	4750	2/01/07	25	6.3	8.6	10.9
LAMB BUTTE		1/29/07	47	17.1	15.9	--
LESTER CREEK	3100	2/01/07	50	15.6	19.4	14.7
LOLO PASS SNOTEL	5240	2/01/07	56	17.0	22.9	20.9
LONE PINE SNOTEL	3800	2/01/07	73	29.3	34.9	24.7
LOOKOUT SNOTEL	5140	2/01/07	59	19.2	20.3	21.9
LOST HORSE MTN CAN.	6300	1/29/07	28	8.6	2.4	6.9
LOST HORSE SNOTEL	5000	2/01/07	43	14.0	17.5	13.7
LOST LAKE SNOTEL	6110	2/01/07	---	31.9	36.4	40.0
LOUP LOUP CAMPGROUND		1/27/07	32	9.7	12.3	--
LUBRECHT FOREST NO 3	5450	1/30/07	14	2.9	3.3	4.0
LUBRECHT FOREST NO 4	4650	1/30/07	6	1.4	2.0	2.9
LUBRECHT FOREST NO 6	4040	1/30/07	7	1.4	2.5	2.8
LUBRECHT HYDROPLOT	4200	1/30/07	15	3.2	4.0	4.2
LUBRECHT SNOTEL	4680	2/01/07	16	3.9	3.6	4.2
LYMAN LAKE SNOTEL	5900	2/01/07	129	47.6	44.7	43.4
LYNN LAKE	4000	2/01/07	47	17.5	15.3	14.9
MARIAS PASS	5250	1/31/07	37	11.1	9.4	11.7
MARTEN LAKE AM	3600	1/26/07	162	66.4	48.2	46.8
MARTEN RIDGE SNOTEL	3560	2/01/07	120	63.1	--	--
MAZAMA		1/31/07	37	11.1	10.0	--
MEADOWS CABIN	1900	1/27/07	16	5.5	5.5	5.0
MEADOWS PASS SNOTEL	3240	2/01/07	67	28.0	27.7	19.1
MERRITT	2140	2/01/07	45	15.5	10.5	11.7
METEOR		1/25/07	21	4.9	4.7	--
M F NOOKSACK SNOTEL	4980	2/01/07	104	46.2	35.8	--
MICA CREEK SNOTEL	4750	2/01/07	58	17.3	16.8	18.3
MINERS RIDGE SNOTEL	6200	2/01/07	110	42.0	38.5	36.2
MISSEZULA MTN CAN.	5080	1/27/07	29	8.3	3.6	6.9
MISSION CREEK CAN.	5840	2/01/07	---	25.5	12.4	13.6
MISSION RIDGE	5000	2/01/07	46	17.0	14.0	11.9
MONASHEE PASS CAN.	4500	1/27/07	34	8.9	7.5	9.6
MORSE LAKE SNOTEL	5400	2/01/07	104	40.3	53.9	36.9
MOSES MOUNTAIN (2)	4800	1/31/07	36	10.1	16.3	12.0
MOSES MTN SNOTEL	4800	2/01/07	36	11.2	18.6	10.4
MOSES PEAK	6650	1/31/07	48	16.5	--	9.6
MOSQUITO RDG SNOTEL	5200	2/01/07	---	23.2	26.5	24.6
MOULTON RESERVOIR	6850	1/29/07	17	3.3	7.6	5.2
MOUNT BLUM AM	5800	1/26/07	114	45.6	36.7	37.6
MOUNT CRAG SNOTEL	4050	2/01/07	79	26.8	24.1	19.3
MT. KOBAU CAN.	5500	1/27/07	35	10.4	8.5	7.9
MOUNT TOLMAN	2000	1/25/07	13	2.1	4.0	3.6
MOWICH SNOTEL	3150	2/01/07	---	.0	.0	--
MOUNT GARDNER	3300	1/31/07	40	17.0	16.8	--
MOUNT GARDNER SNOTEL	2860	2/01/07	45	17.9	16.3	12.0
MUTTON CREEK #1	5700	1/26/07	44	14.8	11.6	9.4
N.F. ELK CR SNOTEL	6250	2/01/07	26	6.7	7.8	8.0
NEVADA RIDGE SNOTEL	7020	2/01/07	31	7.4	10.2	10.1
NEW HOZOMEEN LAKE	2800	2/01/07	---	8.5e	9.0	7.8
NEZ PERCE CMP SNOTEL	5650	2/01/07	29	7.4	11.5	9.9
NOISY BASIN SNOTEL	6040	2/01/07	67	20.4	34.5	27.0
OLALLIE MDWS SNOTEL	3960	2/01/07	104	45.7	49.7	39.2
OPHIR PARK	7150	1/28/07	25	6.5	10.9	10.6
PARADISE PARK SNOTEL	5500	2/01/07	118	49.4	54.8	48.1
PARK CK RIDGE SNOTEL	4600	2/01/07	110	44.9	40.7	35.0
PETERSON MDW SNOTEL	7200	2/01/07	25	5.4	6.2	6.1
PIGTAIL PEAK SNOTEL	5900	2/01/07	99	38.0	45.7	34.3
PIKE CREEK SNOTEL	5930	2/01/07	49	15.7	17.7	17.8
PIPESTONE PASS	7200	1/27/07	11	1.9	2.7	3.2
POPE RIDGE SNOTEL	3540	2/01/07	57	17.0	19.1	14.9
POSTILL LAKE CAN.	4200	1/29/07	25	6.6	5.6	5.8
POTATO HILL SNOTEL	4500	2/01/07	71	23.3	26.4	18.5
QUARTZ PEAK SNOTEL	4700	2/01/07	51	15.2	20.1	15.4
RAGGED MOUNTAIN	4200	1/28/07	53	15.8	22.1	14.1
RAGGED MTN SNOTEL	4210	2/01/07	55	17.3	--	--
RAGGED RIDGE	3330	1/29/07	23	6.1	5.6	--
RAINY PASS SNOTEL	4780	2/01/07	91	31.4	27.8	30.2
RAINY PASS	4780	1/26/07	89	32.2	23.0	27.6
REX RIVER SNOTEL	1900	2/01/07	75	36.5	29.8	21.7
ROCKER PEAK SNOTEL	8000	2/01/07	35	7.4	10.4	9.1
ROCKY CREEK AM	2100	1/26/07	87	34.8	17.6	20.2
ROUND TOP MTN	4020	1/29/07	35	9.6	10.9	--
RUSTY CREEK	4000	1/26/07	24	6.2	6.8	4.9
SF THUNDER CK AM	2200	1/26/07	24	9.6	.0	5.9
SADDLE MTN SNOTEL	7900	2/01/07	47	12.5	19.9	17.3
SALMON MDWS SNOTEL	4500	2/01/07	32	9.0	10.2	7.5
SASSE RIDGE SNOTEL	4200	2/01/07	79	32.0	28.7	23.8
SATUS PASS	4030	1/31/07	34	10.6	14.7	8.7
SAVAGE PASS SNOTEL	6170	2/01/07	47	15.1	17.0	17.6
SAWMILL RIDGE	4700	2/01/07	61	23.3	23.8	22.9
SAWMILL RIDGE SNOTEL	4700	2/01/07	81	41.8	--	--
SCHREIBERS MDW AM	3400	1/29/07	124	52.0	35.9	32.4
SENTINEL BT SNOTEL	4920	2/01/07	26	6.9	7.8	--
SHEEP CANYON SNOTEL	4050	2/01/07	69	26.3	28.4	23.9
SHERWIN SNOTEL	3200	2/01/07	---	9.1	7.7	8.4
SILVER STAR MTN CAN.	5600	1/29/07	58	21.0	21.1	20.0

Percent of Average

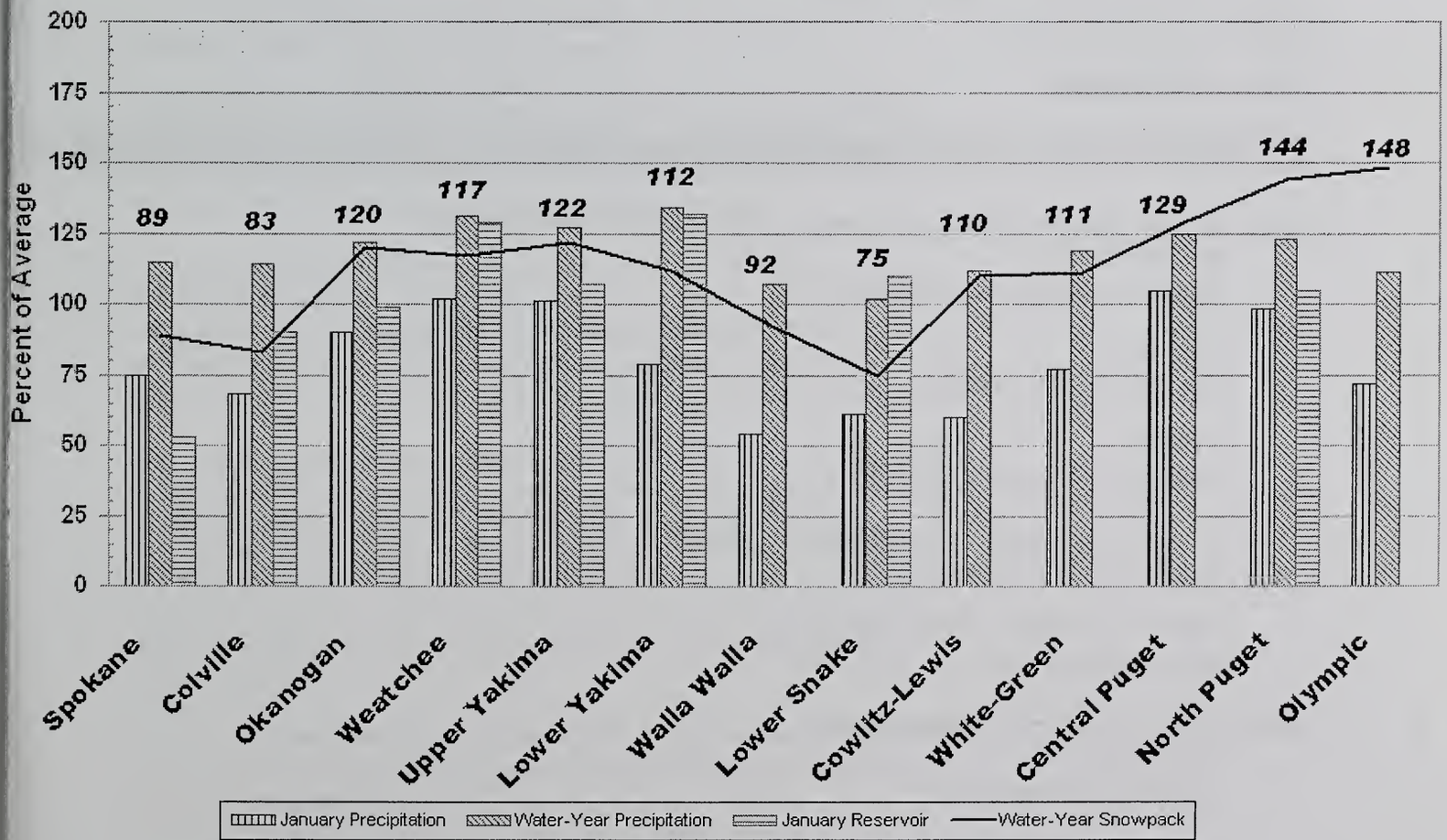
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00
SKALKAHO SNOTEL	7260	2/01/07	45	12.7	17.1	16.0
SKOOKUM CREEK SNOTEL	3920	2/01/07	51	26.4	17.2	20.2
SKOOKUM LAKES	4230	1/31/07	33	8.0	11.2	--
SOURDOUGH GUL SNOTEL	4000	2/01/07	4	1.5	.7	--
SPENCER MDW SNOTEL	3400	2/01/07	63	27.8	30.4	21.9
SPIRIT LAKE SNOTEL	3100	2/01/07	---	4.0	6.0	5.1
SPOTTED BEAR MTN.	7000	1/26/07	30	8.0	7.4	10.1
SPRUCE SPGS SNOTEL	5700	2/01/07	34	9.9	15.7	--
STARVATION MOUNTAIN	6750	1/29/07	48	17.3	19.0	13.0
STAHL PEAK SNOTEL	6030	2/01/07	72	21.9	27.7	24.1
STAMPEDE PASS SNOTEL	3860	2/01/07	90	34.4	37.4	31.0
STEMILT SLIDE	5000	1/31/07	41	12.9	--	10.4
STEVENS PASS SNOTEL	4070	2/01/07	93	31.3	34.0	30.2
STORM LAKE	7780	1/29/07	27	7.3	8.9	8.3
STRYKER BASIN	6180	1/29/07	62	19.2	24.4	21.3
SUMMERLAND RES CAN.	4200	1/30/07	33	9.9	6.8	6.9
SUMMIT G.S. #2	4600	1/30/07	31	7.3	8.5	6.3
SUNSET SNOTEL	5540	2/01/07	---	11.2	12.5	20.9
SURPRISE LKS SNOTEL	4250	2/01/07	91	34.9	52.2	32.2
SWAMP CREEK SNOTEL	4000	2/01/07	46	17.0	11.6	13.9
TEN MILE LOWER	6600	1/26/07	17	3.8	5.3	4.7
TEN MILE MIDDLE	6800	1/26/07	21	4.9	6.3	7.1
THUNDER BASIN SNOTEL	4200	2/01/07	68	30.4	25.4	24.3
THUNDER BASIN	4200	1/27/07	60	20.6	12.0	14.5
THOMPSON CREEK	2500	1/29/07	13	3.4	2.2	--

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00
THOMPSON RIDGE	4650	1/31/07	38	15.1	12.4	--
TINKHAM CREEK SNOTEL	3000	2/01/07	73	27.9	26.5	22.7
TOATS COULEE	2850	1/29/07	17	3.9	4.2	2.6
TOGO	3370	1/26/07	29	7.7	--	7.4
TOUCHET SNOTEL	5530	2/01/07	58	20.5	25.5	23.8
TRINKUS LAKE	6100	1/26/07	71	23.0	30.7	26.6
TROUGH #2 SNOTEL	5310	2/01/07	29	8.2	12.9	7.5
TROUT CREEK CAN.	5650	2/02/07	27	7.1	5.9	5.5
TRUMAN CREEK	4060	2/01/07	15	3.6	3.6	3.5
TUNNEL AVENUE	2450	2/01/07	55	20.0	21.9	14.8
TV MOUNTAIN	6800	1/26/07	33	9.3	11.8	11.8
TWELVEMILE SNOTEL	5600	2/01/07	35	9.6	13.8	12.8
TWIN CAMP	4100	2/01/07	44	16.8	18.3	17.4
TWIN LAKES SNOTEL	6400	2/01/07	71	24.1	32.4	27.5
TWIN SPIRIT DIVIDE	3480	1/28/07	32	8.2	11.0	10.5
UPPER HOLLAND LAKE	6200	1/26/07	56	16.7	19.9	23.7
UPPER WHEELER SNOTEL	4400	2/01/07	37	10.4	12.4	9.2
VULCAN MTN	4660	1/30/07	33	9.3	10.6	--
VULCAN ROAD	3840	1/30/07	27	6.4	7.9	--
WARM SPRINGS SNOTEL	7800	2/01/07	43	12.0	15.0	13.8
WATSON LAKES AM	4500	1/26/07	131	52.5	31.7	35.6
WATERHOLE SNOTEL	5000	2/01/07	95	23.4	24.3	23.2
WEASEL DIVIDE	5450	1/31/07	68	21.5	23.6	21.5
WELLS CREEK SNOTEL	4200	2/01/07	83	31.0	24.5	22.0
WHITE PASS ES SNOTEL	4500	2/01/07	53	16.5	20.5	17.1
WHITE ROCKS MTN CAN.	7200	1/27/07	56	17.7	18.3	15.7

NRCS Natural Resources Conservation Service

February 1, 2007 - Snowpack, Precipitation and Reservoir Conditions at a Glance

(Water Year = October 1, 2006 - Current Date)



USDA NRCS
Natural Resources Conservation Service

Washington State
Snow, Water and Climate Services

Program Contacts

RL "Gus" Hughbanks
State Conservationist
Spokane State Office
W. 316 Boone Ave., Suite 450
Spokane, WA 99201-2348
phone: 509-323-2961
fax: 509-323-2979
gus.hughbanks@wa.usda.gov

Jon Lea
DCO Supervisor
Oregon Data Collection Office
101 SW Main St, Suite 1300
Portland, OR 97204
Phone: 503-414-3267
Fax: 503-414-3277
jon.lea@or.usda.gov

Scott Pattee
Water Supply Specialist
Washington Snow Survey Office
2021 E. College Way, Suite 214
Mount Vernon, WA 98273-2873
phone: 360-428-7684
fax: 360-424-6172
scott.pattee@wa.usda.gov

James Marron
Resource Conservationist
National Water and Climate Center
101 SW Main St., Suite 1600
Portland, OR 97204-3224
phone: 503-414-3047
fax: 503-414-3101
jim.marron@por.usda.gov

Helpful Internet Addresses

NRCS Snow Survey and Climate Services Homepages

Washington:
http://www.wa.nrcs.usda.gov/snow

Oregon:
http://www.or.nrcs.usda.gov/snow

Idaho:
http://www.id.nrcs.usda.gov/snow

National Water and Climate Center (NWCC):
http://www.wcc.nrcs.usda.gov

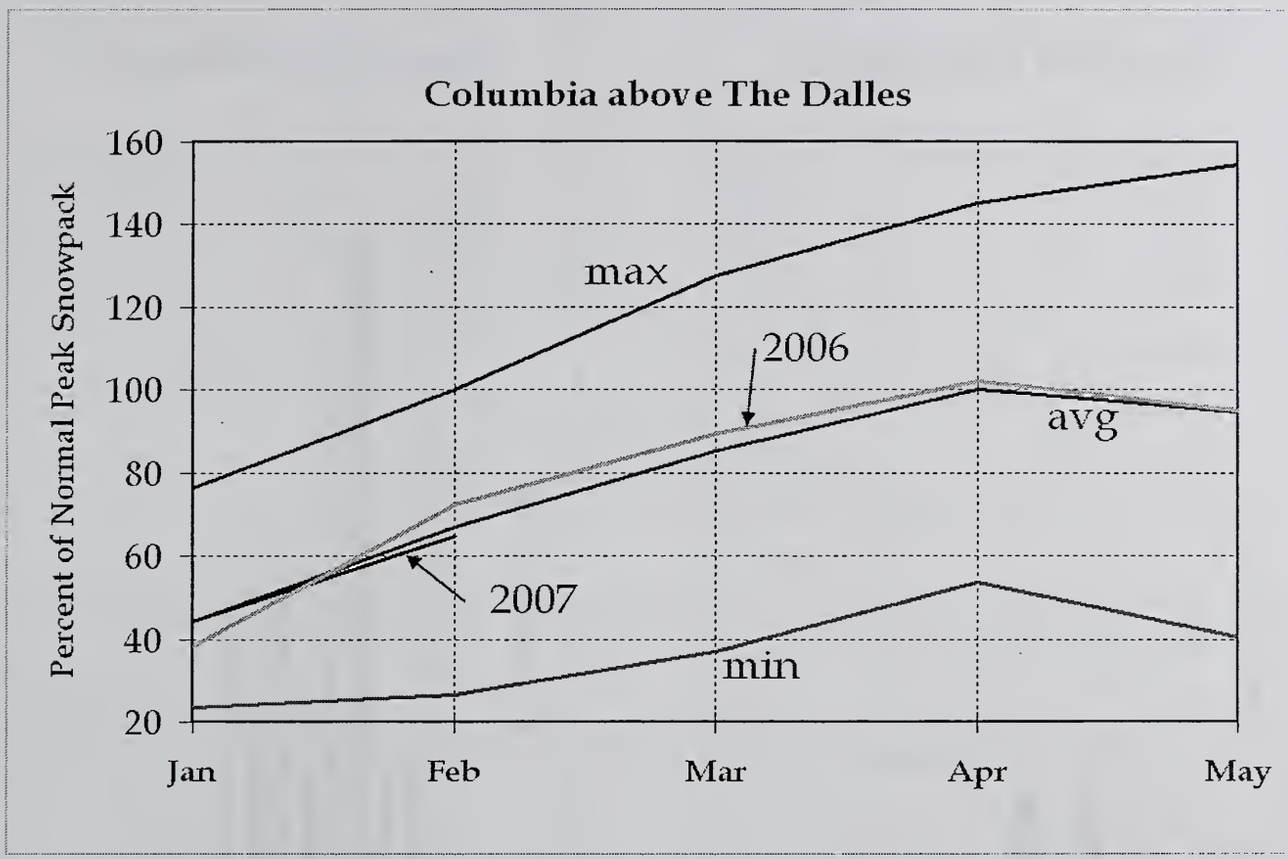
NWCC Anonymous FTP Server:
ftp.wcc.nrcs.usda.gov

USDA-NRCS Agency Homepages

Washington:
http://www.wa.nrcs.usda.gov

NRCS National:
http://www.nrcs.usda.gov

Columbia Basin Snowpack Summary



February 1, 2007

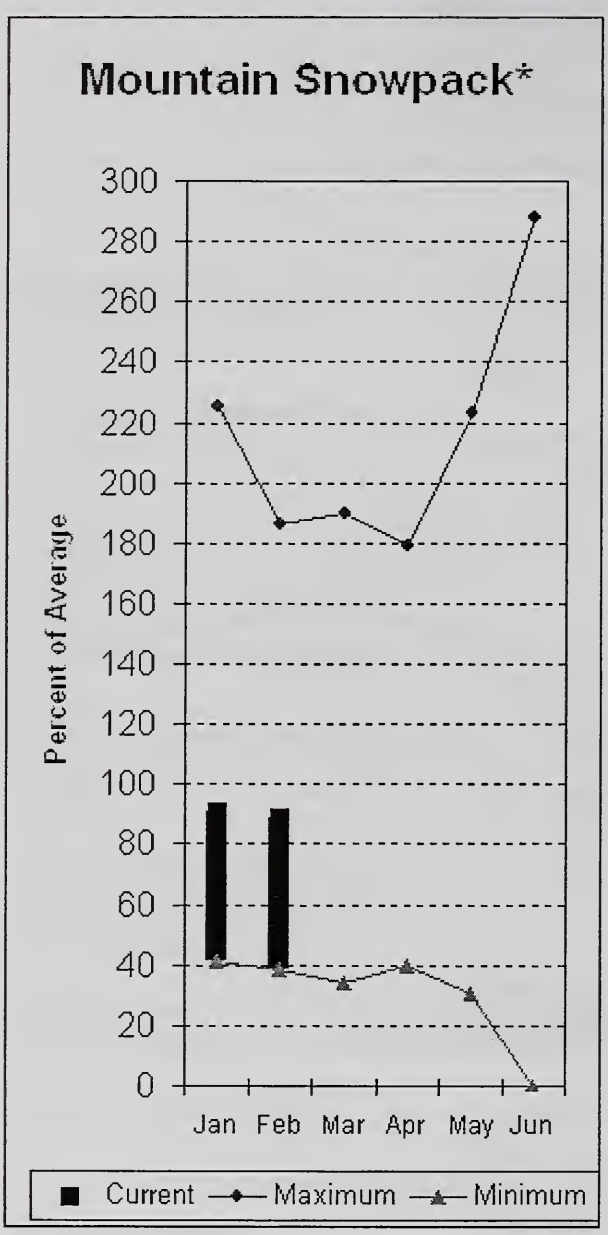
The Columbia Basin snowpack charts are produced, using only automated data. These data are telemetered via remote collection sites in Canada and the United States. The data are provisional, until they are officially released by the responsible data collection agency.

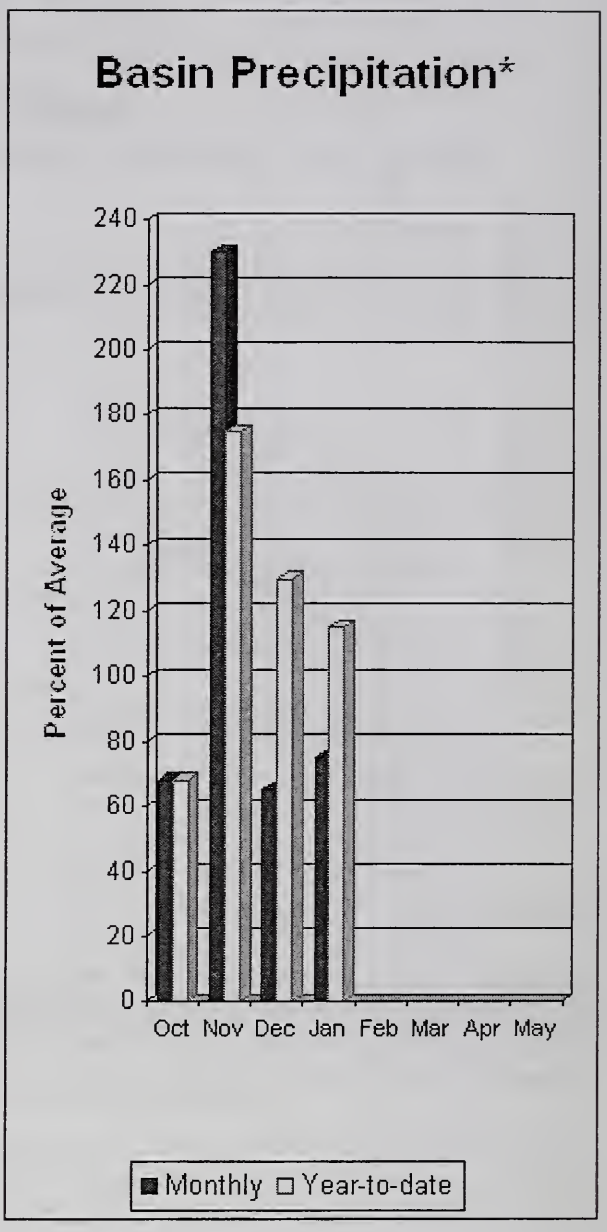
The Canadian snowpack above Arrow Lakes increased 7% from last month. That's the good news! But, that's where the good news ends. The Columbia Basin southern tier snowpack took a real nosedive. The North Cascade snowpack dropped 8%, Yakima - 20%, Snake headwaters - 12%, Boise - 23%, Eastern Oregon - 12%, Salmon - 19%, John Day - 16%, and Deschutes - 11%.

Overall, the Columbia Basin snowpack dropped from 100% of average to 97% of average. This compares to 108% last year. The snowpack is at 65% of the average peak accumulation. This compares to 72% last year. The snowpack above Castlegar is at 111% of average, compared to 97% last year and 107% on January 1. The snowpack above Grand Coulee is at 103% of average, compared to 100% last year and 101% on January 1. The snowpack above Ice Harbor is at 76% of average, compared to 123% last year and 90% on January 1.

If you are just interested in the potential runoff on the Columbia River at The Dalles, the situation hasn't changed very much. However, if you're concerned about water supplies south of the Oregon/Washington border, extending eastward, a very dry January has really taken its toll.

Spokane River Basin





*Based on selected stations

The February 1 forecasts for summer runoff within the Spokane River Basin are 94% of average near Post Falls and 95% at Long Lake. The Chamokane River near Long Lake forecasted to have 86% of average flows for the May-August period. The forecast is based on a basin snowpack that is 89% of average and precipitation that is 115% of average for the water year. Precipitation for January was below normal at 75% of average. Streamflow on the Spokane River at Long Lake was 44% of average for January. February 1 storage in Coeur d'Alene Lake was 61,000acre feet, 53% of average and 26% of capacity. Snowpack at Quartz Peak SNOTEL site was 99% of average with 15.2inches of water content. Average temperatures in the Spokane basin were 4-6 degrees below normal for January and near normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

SPOKANE RIVER BASIN
Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SPOKANE near Post Falls (2)	APR-SEP	1890	2250	2490	94	2730	3090	2650
	APR-JUL	1820	2160	2400	94	2640	2980	2550
SPOKANE at Long Lake (2)	APR-JUL	2022	2420	2690	94	2960	3358	2850
	APR-SEP	2199	2616	2900	95	3184	3601	3070
CHAMOKANE CREEK near Long Lake	MAY-AUG	4.5	6.9	8.8	86	10.9	14.5	10.2

SPOKANE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
COEUR D'ALENE	238.5	61.1	137.3	115.6

SPOKANE RIVER BASIN
Watershed Snowpack Analysis - February 1, 2007

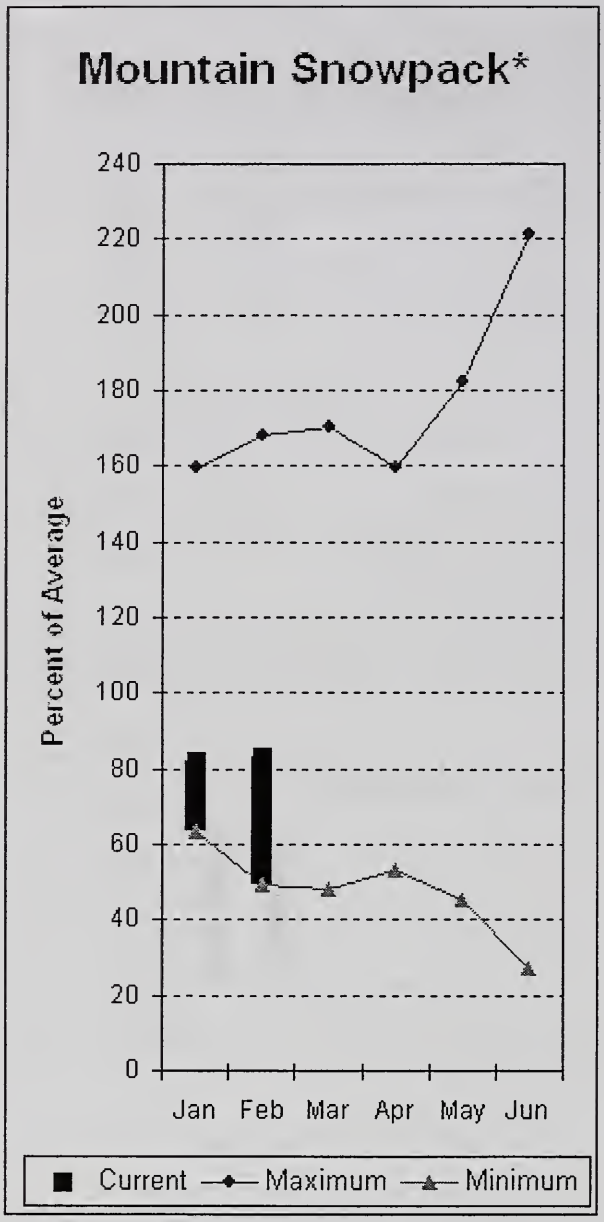
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SPOKANE RIVER	12	89	89
NEWMAN LAKE	1	88	99

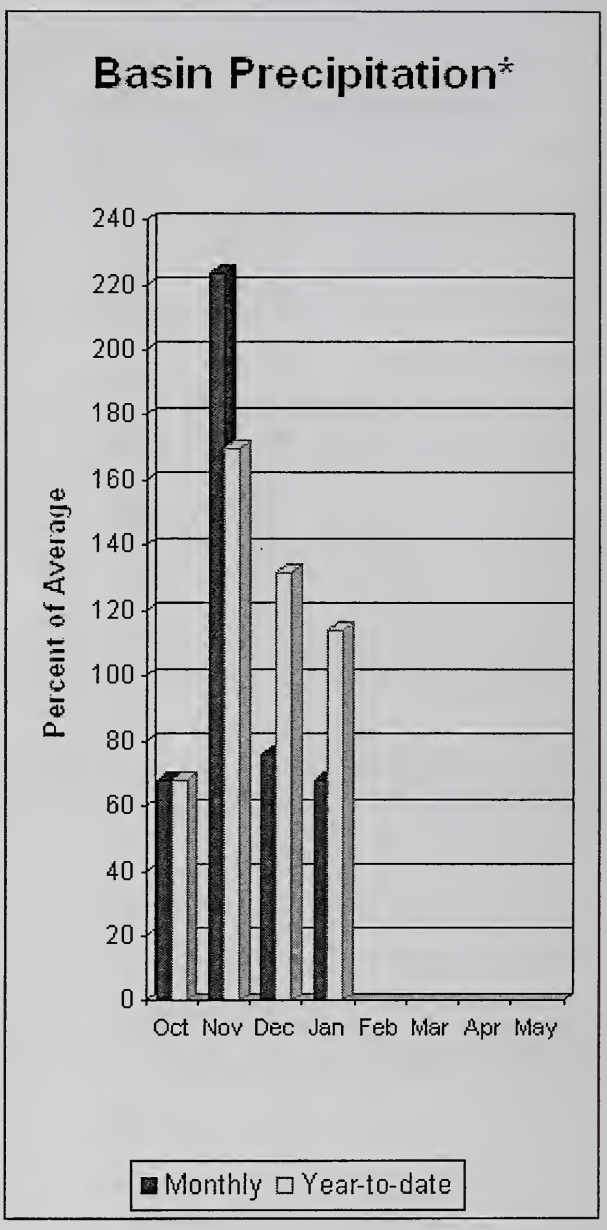
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Colville - Pend Oreille River Basins





*Based on selected stations

The April – September average forecast for the Kettle River streamflow is 98%, Colville at Kettle Falls is 97% and Priest River near the town of Priest River is 99%. January streamflow was 56% of average on the Pend Oreille River, 78% on the Columbia at the International Boundary and 91% on the Kettle River. February 1 snow cover was 83% of average in the Pend Oreille Basin River Basin and 96% in the Kettle River Basin. Bunchgrass Meadows SNOTEL site had 16.1 inches of snow water on the snow pillow. Normally Bunchgrass would have 18.6 inches on February 1. Precipitation during January was 68% of average, bringing the year-to-date precipitation to 114% of average. Reservoir storage in the basin, including Lake Pend Oreille and Priest Lake was 43% of normal. Average temperatures were 4-6 degrees below normal for January and near normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
PEND OREILLE Lake Inflow (2)	APR-JUL	8950	10700	11900	94	13100	14900	12700
	APR-SEP	9773	11695	13000	94	14305	16227	13900
PRIEST near Priest River (1,2)	APR-JUL	645	740	805	99	875	980	815
	APR-SEP	692	790	860	99	933	1046	870
PEND OREILLE bl Box Canyon (2)	APR-JUL	9420	11000	12100	94	13200	14800	12900
	APR-SEP	9973	11895	13200	94	14505	16427	14100
COLVILLE at Kettle Falls	APR-SEP	78	111	137	97	166	213	141
	APR-JUL	70	100	123	96	149	191	128
KETTLE near Laurier	APR-SEP	1595	1788	1920	98	2052	2245	1970
	APR-JUL	1520	1704	1830	98	1956	2140	1870
COLUMBIA at Grand Coulee Dm (1,2)	APR-SEP	52934	61507	65400	102	69293	77866	64000
	APR-JUL	44646	51835	55100	102	58365	65554	53800

COLVILLE - PEND OREILLE RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ROOSEVELT		NO REPORT		
PEND OREILLE	1561.3	676.2	809.2	749.3
PRIEST LAKE	119.3	48.0	60.8	55.5

COLVILLE - PEND OREILLE RIVER BASINS
Watershed Snowpack Analysis - February 1, 2007

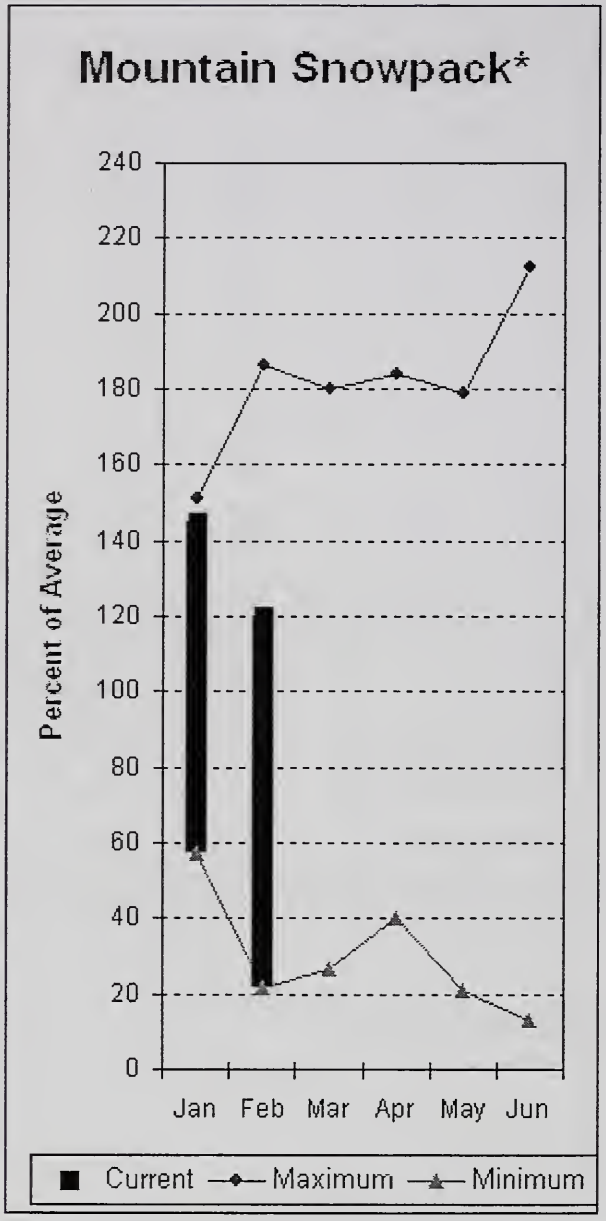
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
COLVILLE RIVER	0	74	0
PEND OREILLE RIVER	8	79	81
KETTLE RIVER	5	103	96

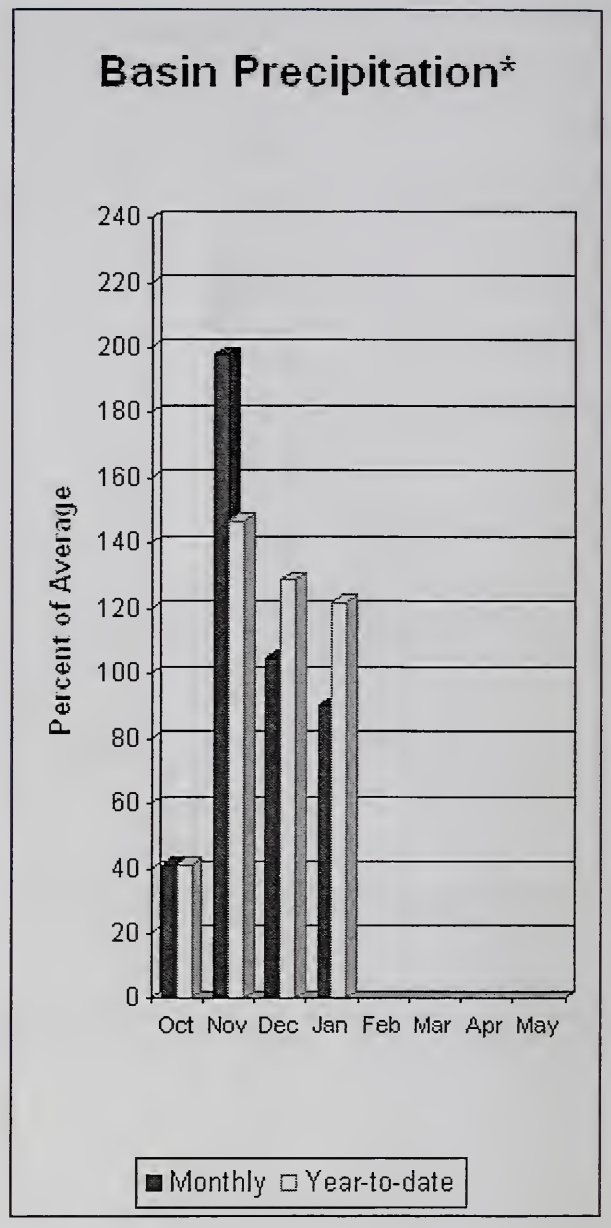
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Okanogan - Methow River Basins





*Based on selected stations

Summer runoff average forecast for the Okanogan River is 107%, Similkameen River is 119%, Methow River is 119% and Salmon Creek is 137%. February 1 snow cover on the Okanogan was 125% of average, Omak Creek was 118% and the Methow was 123%. January precipitation in the Okanogan-Methow was 90% of average, with precipitation for the water year at 122% of average. January streamflow for the Methow River was 94% of average, 79% for the Okanogan River and 99% for the Similkameen. Snow-water content at Salmon Meadows SNOTEL was 9 inches. Average for this site is 7.5 inches on February 1. Combined storage in the Conconully Reservoirs was 17,000-acre feet, which is 70% of capacity and 99% of the February 1 average. Temperatures were 4-10 degrees below normal for January and slightly below average for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<======= Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SIMILKAMEEN near Nighthawk (1)	APR-JUL	1261	1463	1610	119	1764	2001	1350
	APR-SEP	1353	1572	1730	119	1896	2153	1450
OKANOGAN near Tonasket (1)	APR-JUL	985	1470	1690	107	1910	2395	1580
	APR-SEP	1096	1649	1900	107	2151	2704	1770
OKANOGAN at Malott (1)	APR-JUL	1021	1522	1750	107	1978	2479	1635
	APR-SEP	1131	1701	1960	107	2219	2789	1826
Salmon Creek nr Conconully	APR-JUL	14.8	21	25	134	30	38	18.7
	APR-SEP	15.9	22	27	137	32	41	19.7
TOATS COULEE CREEK nr Loomis	APR-JUL	21	31	37	132	43	53	28
	APR-SEP	23	33	39	130	45	55	30
Beaver Creek blw SF nr Twisp	APR-SEP	9.9	13.7	16.3	135	18.9	23	12.1
	APR-JUL	8.8	12.5	15.0	135	17.5	21	11.1
METHOW RIVER near Pateros	APR-SEP	900	1056	1170	119	1290	1476	985
	APR-JUL	825	972	1080	119	1193	1370	910

OKANOGAN - METHOW RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
SALMON LAKE	10.5	9.4	7.5	8.4
CONCONULLY RESERVOIR	13.0	7.1	4.1	8.2

OKANOGAN - METHOW RIVER BASINS
Watershed Snowpack Analysis - February 1, 2007

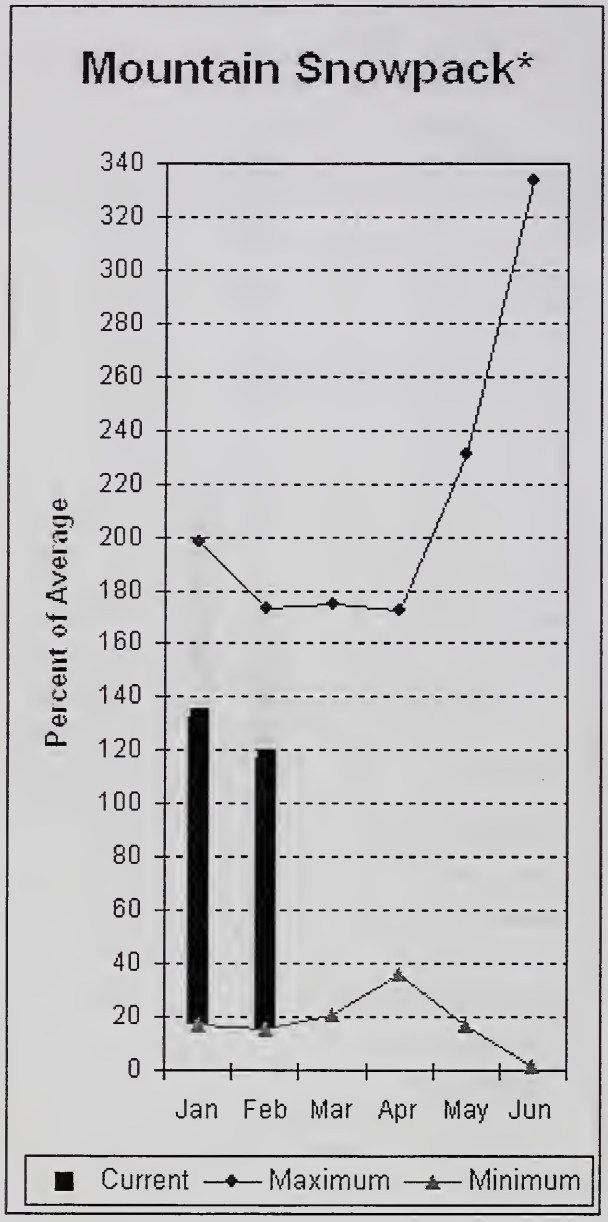
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
OKANOGAN RIVER	18	118	125
OMAK CREEK	3	72	118
SANPOIL RIVER	1	82	58
SIMILKAMEEN RIVER	4	182	128
TOATS COULEE CREEK	1	92	150
CONCONULLY LAKE	3	105	138
METHOW RIVER	8	111	123

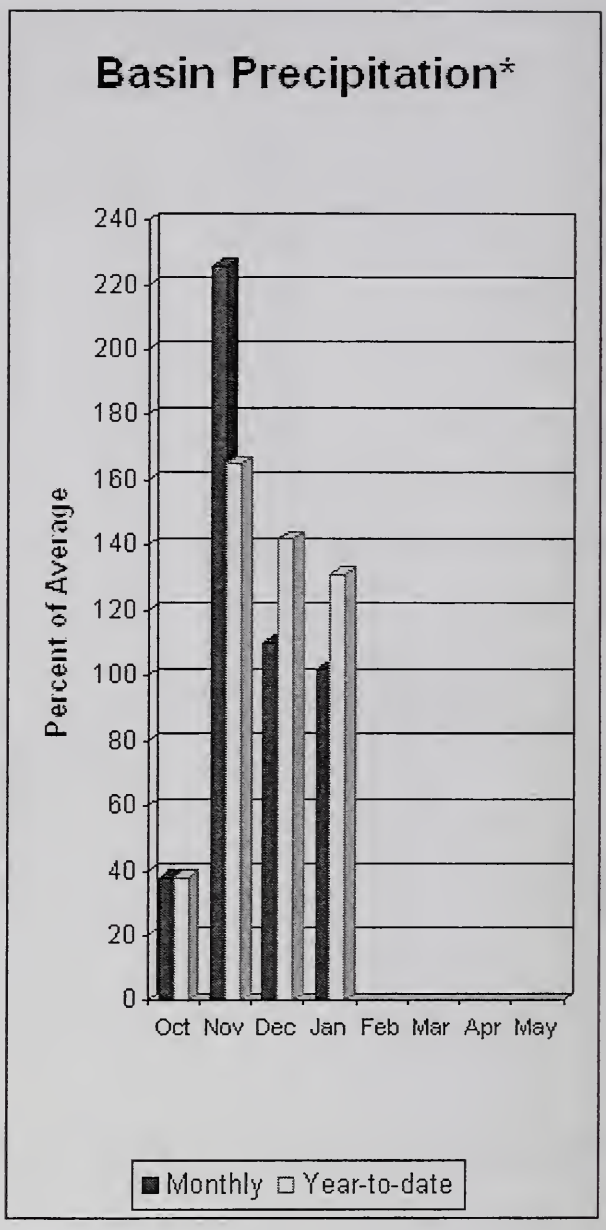
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Wenatchee - Chelan River Basins





*Based on selected stations

Precipitation during January was 102% of average in the basin and 131% for the year-to-date. Runoff for Entiat River is forecast to be 113% of average for the summer. The February-September average forecast for Chelan River is 118%, Wenatchee River at Plain is 121% and Stehekin is 117%. Icicle, Stemilt and Squilchuck creeks are all forecasted to have near average flows as well. January average streamflows on the Chelan River were 85% and on the Wenatchee River 68%. February 1 snowpack in the Wenatchee River Basin was 117% of average; the Chelan, 114%; the Entiat, 114%; Stemilt Creek, 128% and Colockum Creek, 112%. Reservoir storage in Lake Chelan was 409,000-acre feet, 129% of February 1 average and 60% of capacity. Lyman Lake SNOTEL had the most snow water with 47.6 inches of water. This site would normally have 43.4 inches on February 1. Temperatures were 2-6 degrees below normal for January and 1 degree below for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CHELAN RIVER near Chelan	APR-SEP	1241	1334	1400	118	1467	1569	1190
	APR-JUL	1090	1172	1230	117	1289	1379	1050
STEHEKIN near STEHEKIN	APR-SEP	860	924	970	117	1017	1087	830
	APR-JUL	722	780	820	117	861	924	700
ENTIAT RIVER nr Ardenvoir	APR-SEP	217	248	270	113	293	329	240
	APR-JUL	198	225	245	114	266	297	215
WENATCHEE at Plain	APR-SEP	1245	1365	1450	121	1538	1671	1200
	APR-JUL	1130	1229	1300	120	1372	1482	1080
WENATCHEE R. at Peshastin	APR-SEP	1702	1859	1970	120	2084	2257	1640
	APR-JUL	1546	1677	1770	120	1865	2009	1480
STEMILT CK nr Wenatchee (miner's in)	MAY-SEP	110	142	164	119	186	218	138
ICICLE CREEK near Leavenworth	APR-SEP	296	336	365	106	395	441	345
	APR-JUL	271	308	335	105	363	406	320
COLUMBIA R. bl Rock Island Dam (2)	APR-SEP	62051	68630	73100	105	77570	84149	69500
	APR-JUL	50588	57442	62100	105	66758	73612	59000

WENATCHEE - CHELAN RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CHELAN LAKE	676.1	408.5	309.0	315.5

WENATCHEE - CHELAN RIVER BASINS
Watershed Snowpack Analysis - February 1, 2007

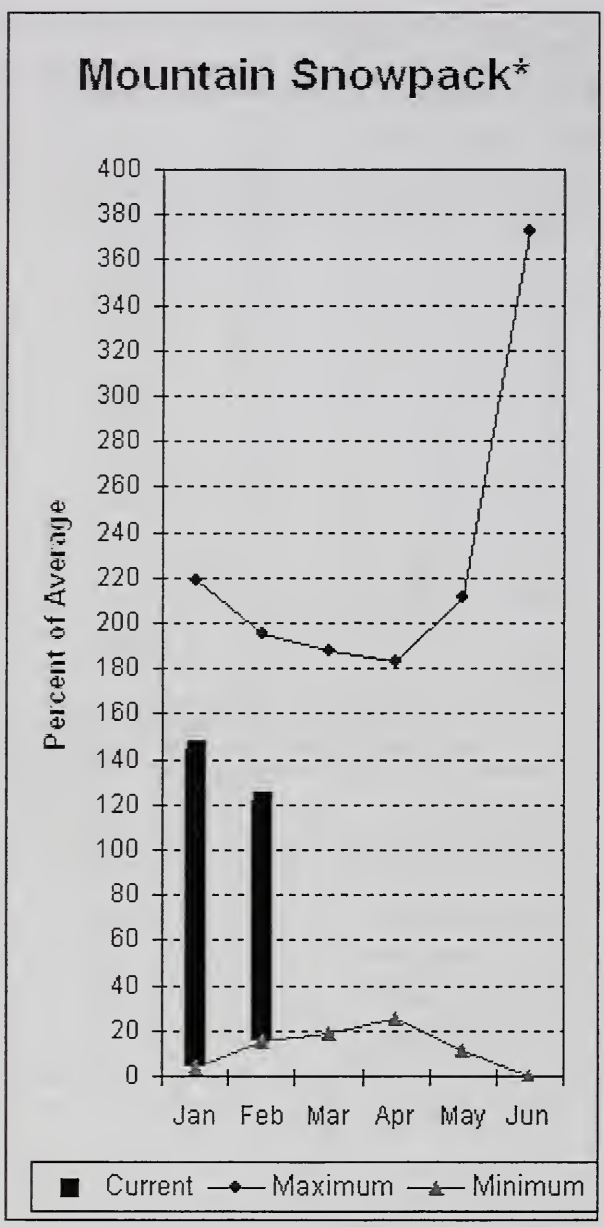
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CHELAN LAKE BASIN	7	110	114
ENTIAT RIVER	1	89	114
WENATCHEE RIVER	11	102	117
STEMILT CREEK	3	104	128
COLOCKUM CREEK	2	80	112

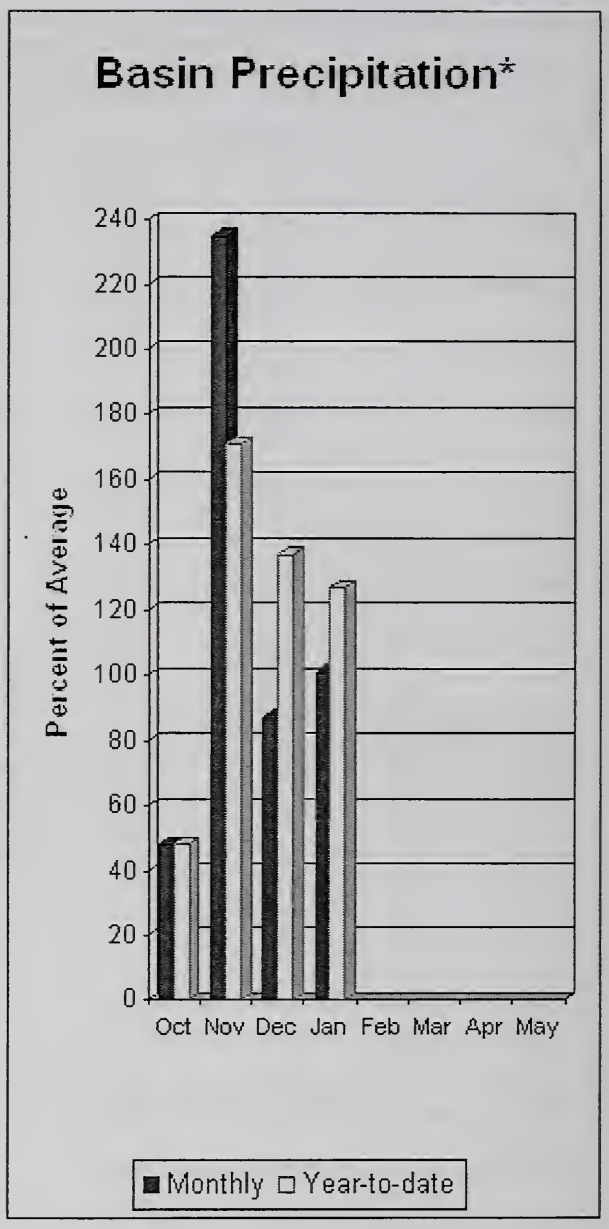
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Upper Yakima River Basin





*Based on selected stations

February 1 reservoir storage for the Upper Yakima reservoirs was 475,000-acre feet, 107% of average. Forecasts for the Yakima River at Cle Elum are 116% of average and the Teanaway River near Cle Elum is at 117%. Lake inflows are all forecasted to be near that same range this summer. January streamflows within the basin were Yakima near Cle Elum at 39% and Cle Elum River near Roslyn at 41%. February 1 snowpack was 122% based upon 11 snow course and SNOTEL readings within the Upper Yakima Basin. Precipitation was 101% of average for January and 127% year-to-date for water. Volume forecasts for the Yakima Basin are for natural flow. As such, they may differ from the U.S. Bureau of Reclamation's forecast for the total water supply available, which includes irrigation return flow.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KEECHELUS LAKE INFLOW	APR-JUL	113	128	139	115	150	168	121
	APR-SEP	124	140	152	114	164	183	133
KACHESS LAKE INFLOW	APR-JUL	103	117	126	114	136	151	111
	APR-SEP	112	126	136	113	147	163	120
CLE ELUM LAKE INFLOW	APR-JUL	379	432	470	115	510	570	410
	APR-SEP	408	470	515	114	562	634	450
YAKIMA at Cle Elum	APR-JUL	777	878	950	116	1025	1140	820
	APR-SEP	848	960	1040	116	1123	1251	900
TEANAWAY near Cle Elum	APR-JUL	122	148	167	117	187	219	143
	APR-SEP	126	152	171	117	191	223	146

UPPER YAKIMA RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
KEECHELUS	157.8	83.3	59.5	89.9
KACHESS	239.0	147.0	75.0	139.4
CLE ELUM	436.9	244.3	104.0	215.4

UPPER YAKIMA RIVER BASIN
Watershed Snowpack Analysis - February 1, 2007

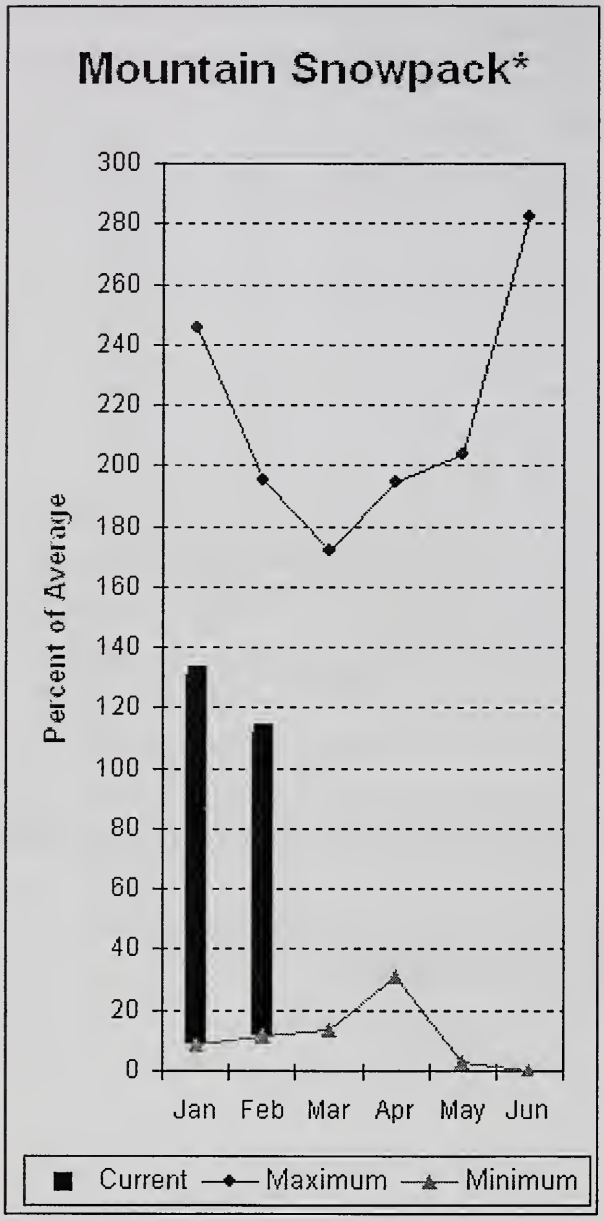
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER YAKIMA RIVER	11	97	122

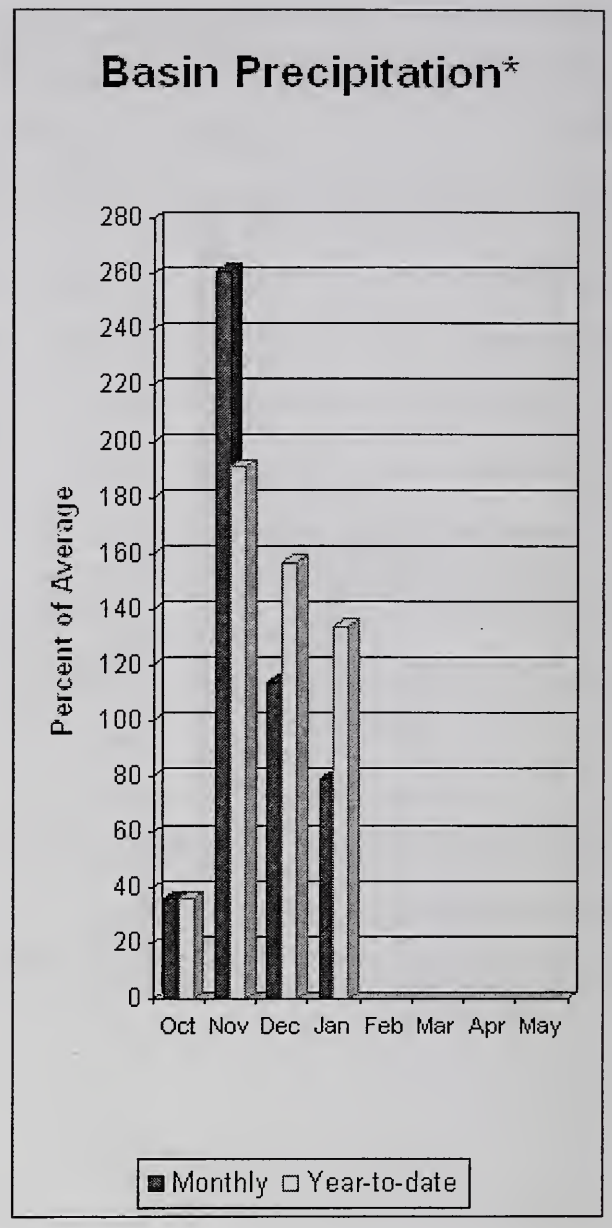
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Lower Yakima River Basin





*Based on selected stations

January average streamflows within the basin were: Yakima River near Parker, 46% and the Naches River near Naches, 53%. February 1 reservoir storage for Bumping and Rimrock reservoirs was 161,000-acre feet, 132% of average. Forecast average flows for Yakima River near Parker are 116%; American River near Nile, 119%; Ahtanum Creek, 116%; and Klickitat River near Glenwood, 90%. February 1 snowpack was 112% based upon 8 snow course and SNOTEL readings within the Lower Yakima Basin and Ahtanum Creek reported in at 108%of average. Precipitation was 79% of average for January and 134% year-to-date for water. Temperatures were 2-6 degrees below normal for January and 2 degrees below average for the water year. Volume forecasts for Yakima Basin are for natural flow. As such, they February differ from the U.S. Bureau of Reclamation's forecast for the total water supply available, which includes irrigation return flow.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BUMPING LAKE INFLOW	APR-SEP	127	144	156	118	169	188	132
	APR-JUL	117	132	143	117	154	171	122
AMERICAN RIVER near Nile	APR-SEP	109	127	140	119	154	175	118
	APR-JUL	101	118	130	120	143	163	108
RIMROCK LAKE INFLOW	APR-SEP	227	252	270	113	288	317	240
	APR-JUL	190	211	225	110	240	263	205
NACHES near Naches	APR-SEP	764	867	940	113	1016	1134	835
	APR-JUL	690	783	850	112	919	1027	760
AHTANUM CREEK at Union Gap	APR-SEP	24	32	37	116	43	52	32
	APR-JUL	23	30	35	117	41	50	30
YAKIMA near Parker	APR-SEP	1900	2090	2220	116	2350	2540	1920
	APR-JUL	1711	1883	2000	116	2117	2289	1730
KLICKITAT near Glenwood	APR-JUN	104	117	125	97	133	146	129
	APR-SEP	116	134	146	90	158	176	163

LOWER YAKIMA RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BUMPING LAKE	33.7	15.9	23.0	9.9
RIMROCK	198.0	145.1	99.1	111.8

LOWER YAKIMA RIVER BASIN
Watershed Snowpack Analysis - February 1, 2007

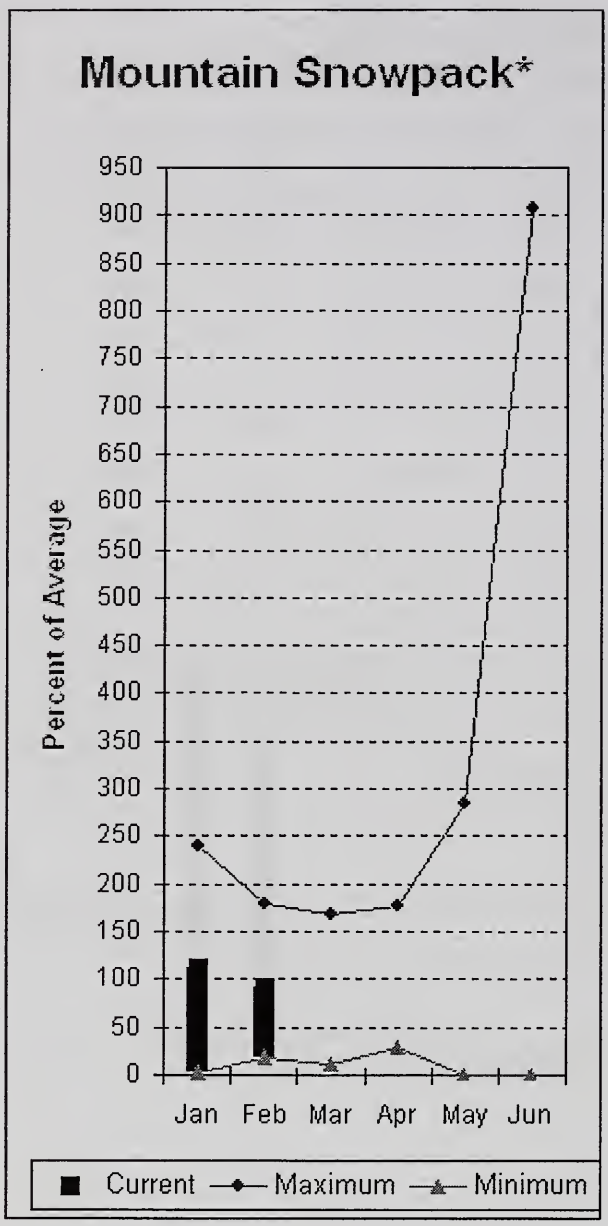
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average

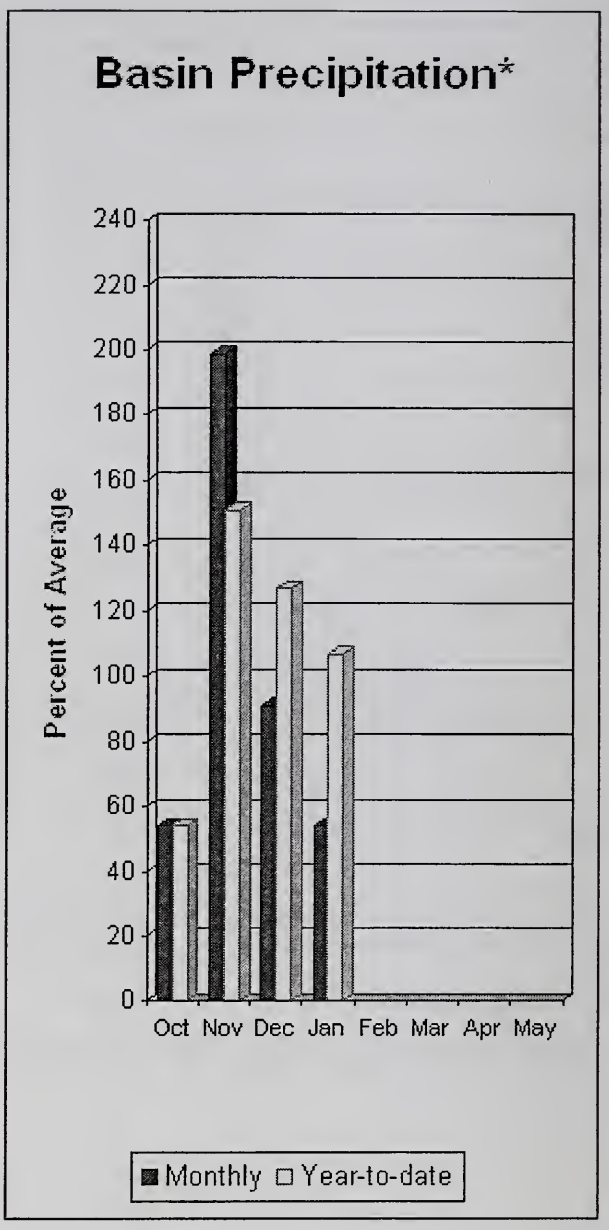
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Walla Walla River Basin





*Based on selected stations

January precipitation was 54% of average, maintaining the year-to-date precipitation at 107% of average. Snowpack in the basin was 92% of average. Streamflow forecasts are 104% of average for Mill Creek at Kooskooskie and 100% for the SF Walla Walla near Milton-Freewater. January streamflow was 36% of average for the Walla Walla River. Average temperatures were 4-6 degrees below normal for January and for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SF WALLA WALLA near Milton-Freewater	APR-JUL	43	49	54	100	59	66	54
	APR-SEP	54	62	67	100	73	81	67
MILL CREEK at Kooskooskie	APR-JUL	18.1	22	25	104	28	33	24
	APR-SEP	21	26	29	104	32	38	28

WALLA WALLA RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

WALLA WALLA RIVER BASIN
Watershed Snowpack Analysis - February 1, 2007

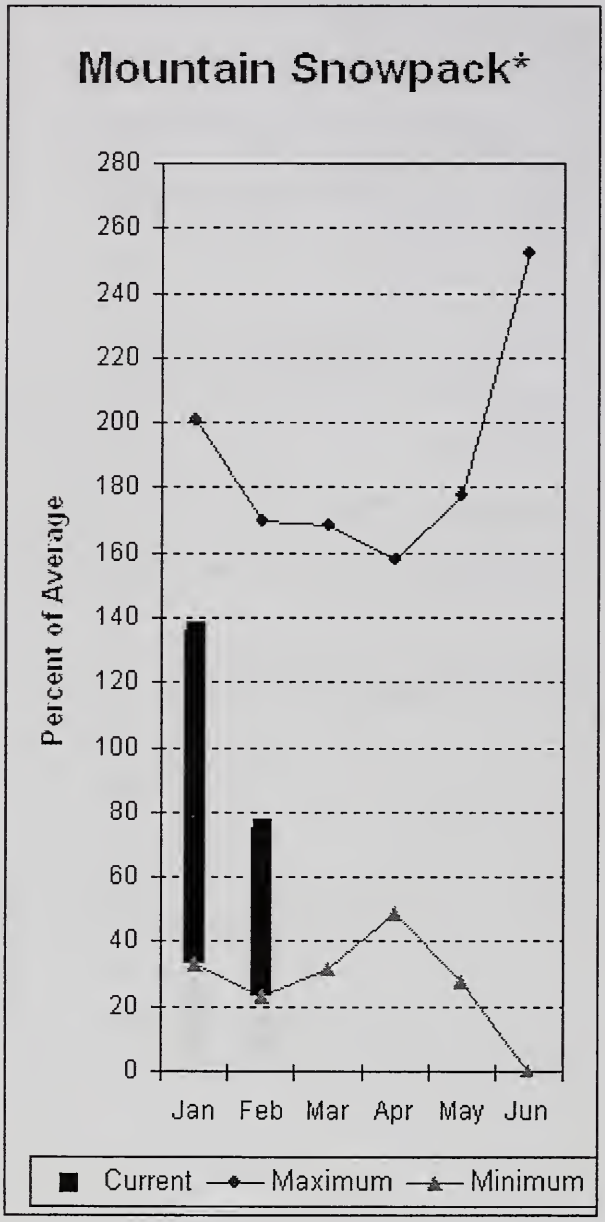
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WALLA WALLA RIVER	2	79	92

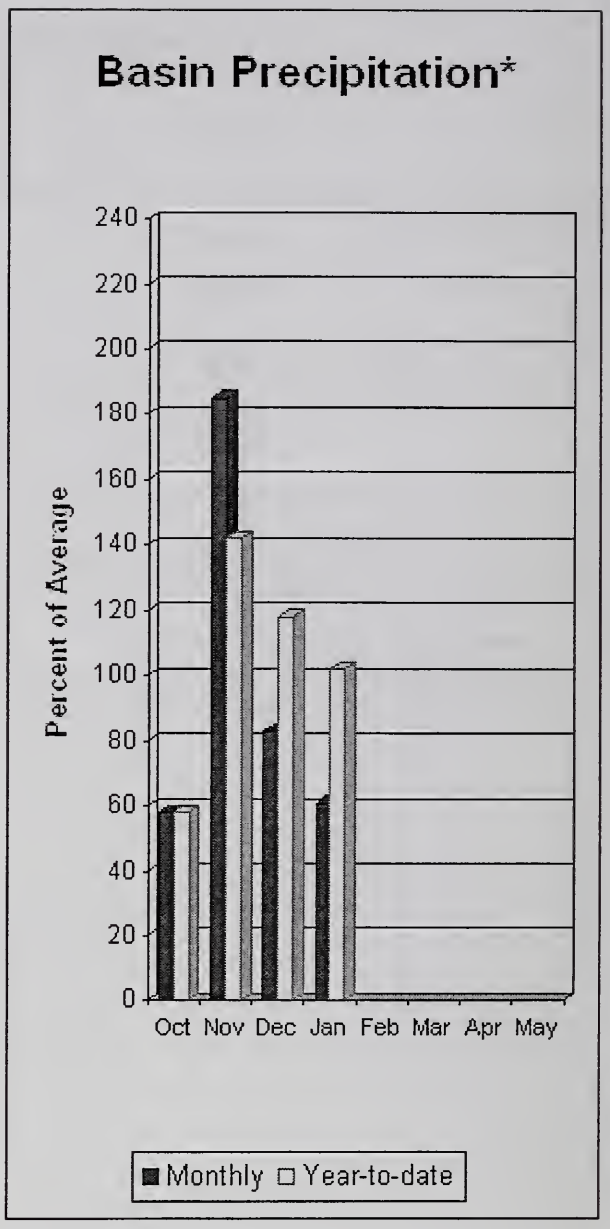
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Lower Snake River Basin





*Based on selected stations

The April - September forecast is for 93% for Clearwater River at Spalding. The Snake and Grande Ronde rivers can expect summer flows to be about 78% and 81% of normal respectively. January precipitation was 61% of average, bringing the year-to-date precipitation to 102% of average. February 1 snowpack readings averaged 75% of normal. January streamflow was 49% of average for Snake River below Lower Granite Dam and 45% for Grande Ronde River near Troy. Average temperatures were 4-6 degrees below normal for January and 2-4 degrees below normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GRANDE RONDE at Troy (1)	MAR-JUL	1002	1163	1280	81	1402	1592	1580
	APR-SEP	832	993	1110	81	1234	1428	1370
CLEARWATER at Spalding (1,2)	APR-JUL	3942	5990	6920	93	7850	9898	7430
	APR-SEP	4322	6370	7300	93	8230	10278	7850
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	7485	13891	16800	78	19709	26115	21600
	APR-SEP	8331	15530	18800	78	22070	29269	24100

LOWER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	2386.7	2504.6	2170.7

LOWER SNAKE RIVER BASIN
Watershed Snowpack Analysis - February 1, 2007

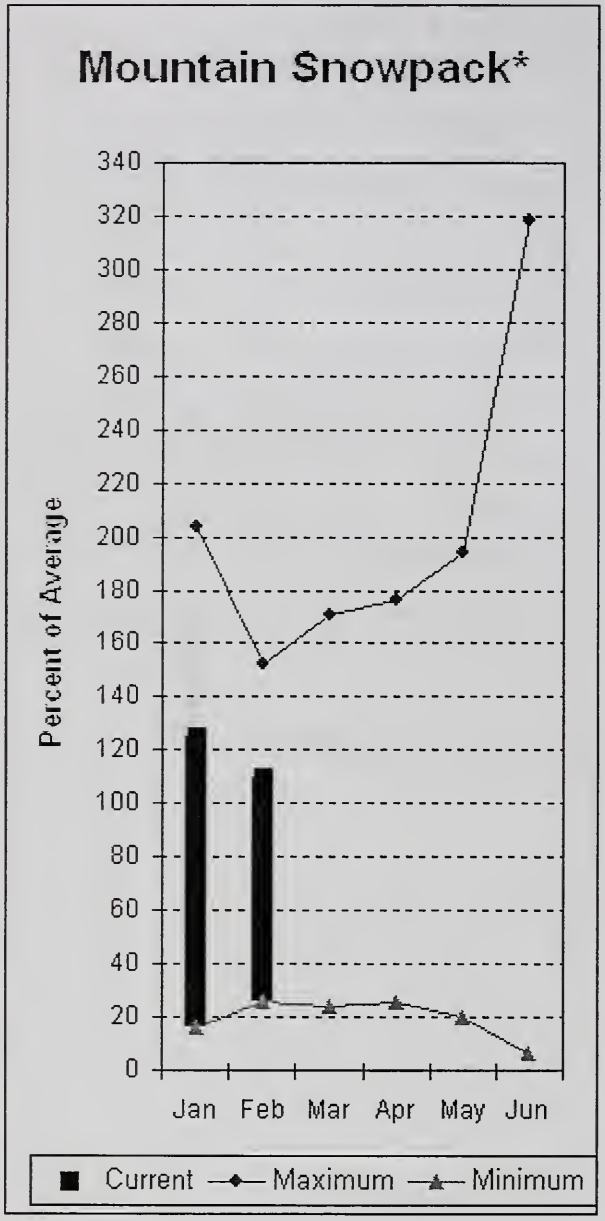
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
LOWER SNAKE, GRANDE RONDE	16	72	75

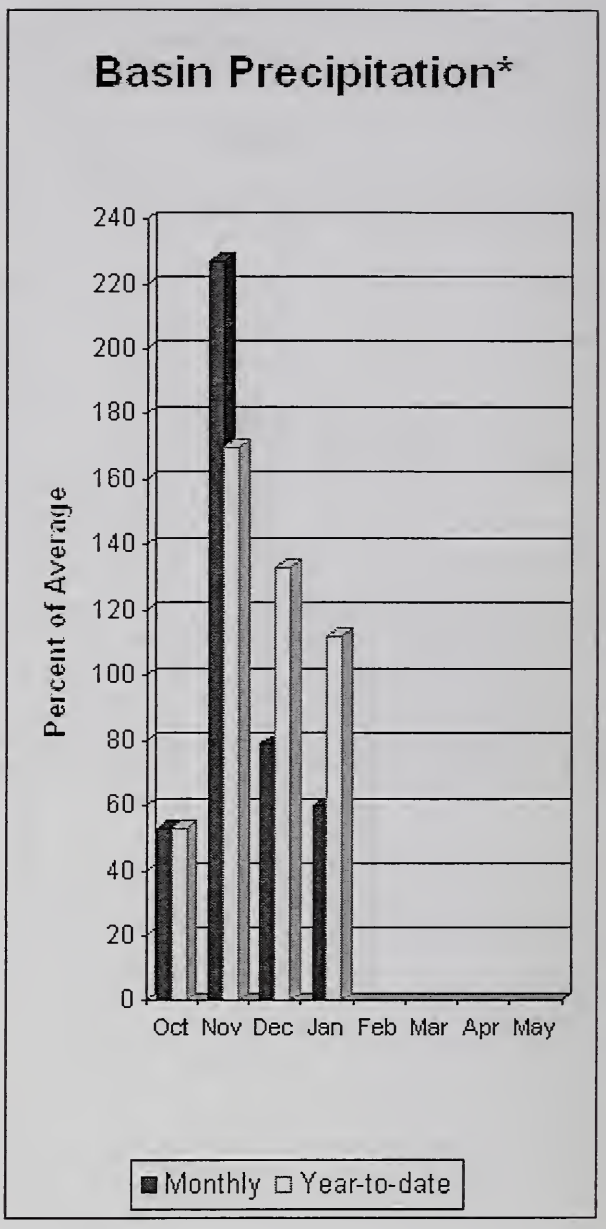
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Cowlitz - Lewis River Basins





*Based on selected stations

Forecasts for April – September streamflows within the basin are Lewis River at Ariel, 100% and Cowlitz River at Castle Rock, 97% of average. The Columbia at The Dalles is forecasted to have 95% of average flows this summer. January average streamflow for Cowlitz River was 48% and 31% for Lewis River. The Columbia River at The Dalles was 67% of average. January precipitation was 60% of average and the water-year average was 112%. February 1 snow cover for Cowlitz River was 107%, and Lewis River was 113% of average. Average temperatures were 2-4 degrees below normal during January and 4-6 degrees below normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
LEWIS at Ariel (2)	APR-JUL	737	911	1030	100	1149	1323	1031
	APR-SEP	872	1053	1175	100	1297	1478	1176
COWLITZ R. bl Mayfield Dam (2)	APR-SEP	866	1517	1960	102	2403	3054	1922
	APR-JUL	621	1275	1720	102	2165	2819	1689
COWLITZ R. at Castle Rock (2)	APR-SEP	1023	1944	2570	97	3196	4117	2639
	APR-JUL	1472	1929	2240	98	2551	3008	2295
KLICKITAT near Glenwood	APR-JUN	104	117	125	97	133	146	129
	APR-SEP	116	134	146	90	158	176	163
COLUMBIA R. at The Dalles (2)	APR-SEP	76064	86446	93500	95	100554	110936	98600
	APR-JUL	61383	72706	80400	95	88094	99417	84600

COWLITZ - LEWIS RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MOSSYROCK	0.0	1199.7	1330.0	---
SWIFT	0.0	597.8	690.0	---
YALE	0.0	356.1	385.0	---
MERWIN	0.0	404.0	388.0	---

COWLITZ - LEWIS RIVER BASINS
Watershed Snowpack Analysis - February 1, 2007

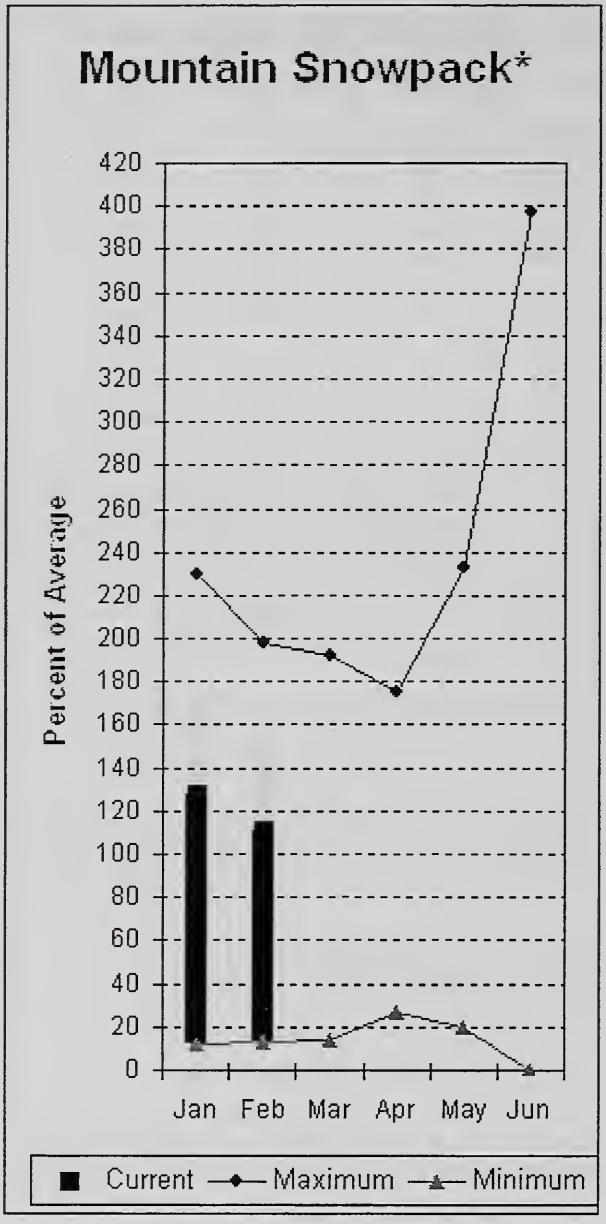
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LEWIS RIVER	5	75	113
COWLITZ RIVER	6	87	107

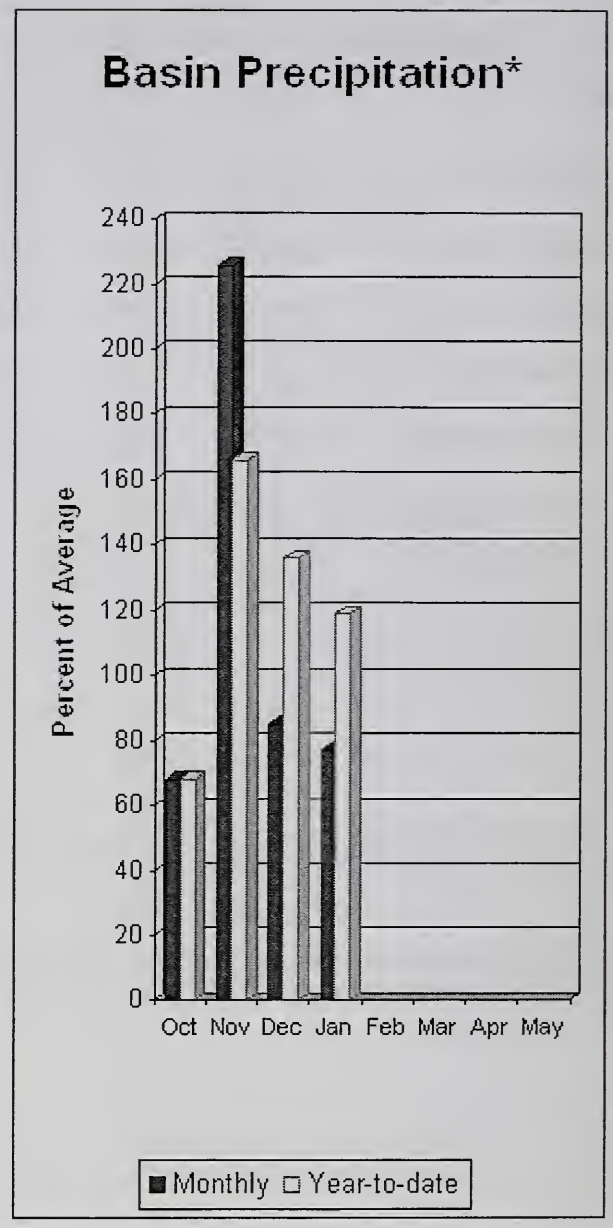
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

White - Green River Basins





*Based on selected stations

Summer runoff is forecast to be 103% of normal for the Green River below Howard Hanson Dam and 100% for the White River near Buckley. February 1 snowpack was 109% of average in the White River, 115% in the Puyallup River and 110% in Green River. Water content on February 1 at Corral Pass SNOTEL, at an elevation of 6,000 feet, was 24.2 inches. This site has a February 1 average of 22.1 inches. January precipitation was 77% of average, bringing the water year-to-date to 119% of average for the basins. Average temperatures in the area were 2-4 degrees below normal for January and for the water-year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WHITE near Buckley (1,2)	APR-JUL	342	409	440	100	471	538	440
	APR-SEP	421	499	535	100	571	649	534
GREEN R below Howard Hansen (1,2)	APR-JUL	160	222	250	103	278	340	243
	APR-SEP	182	246	275	103	304	368	268

WHITE - GREEN - PUYALLUP RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

WHITE - GREEN - PUYALLUP RIVER BASINS
Watershed Snowpack Analysis - February 1, 2007

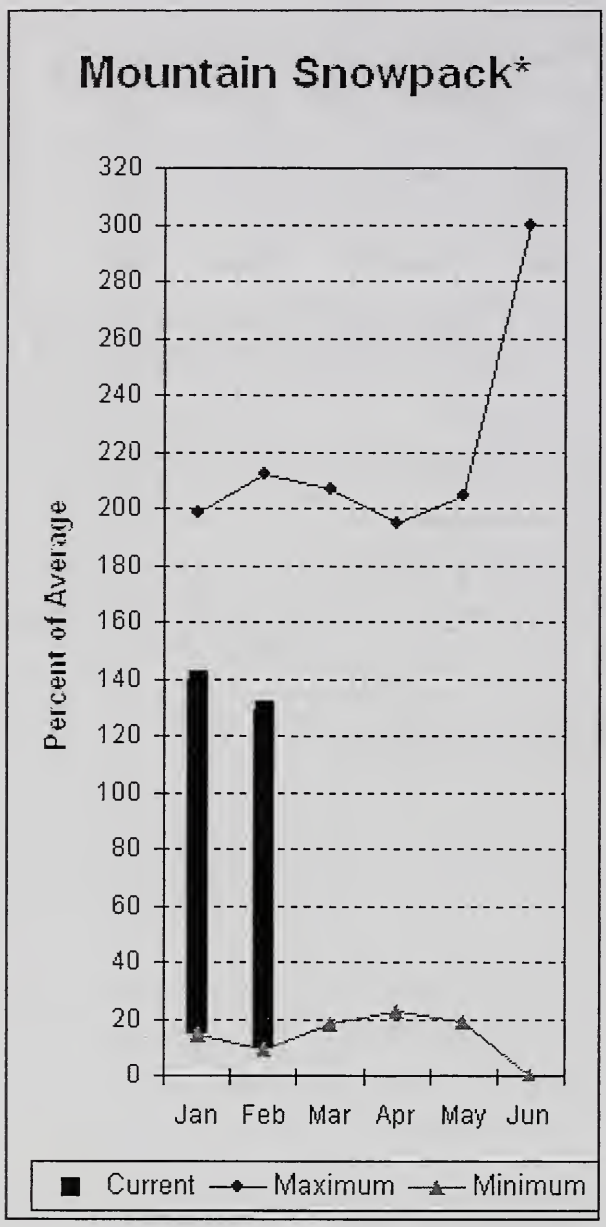
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WHITE RIVER	2	79	109
GREEN RIVER	7	87	98
PUYALLUP RIVER	3	86	115

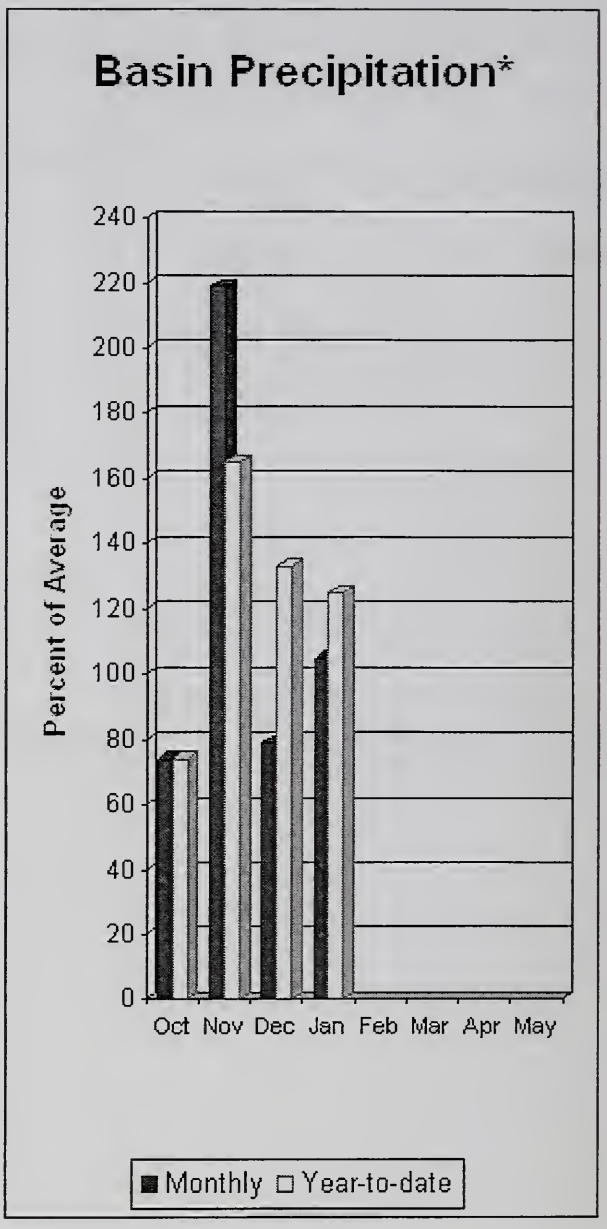
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Central Puget Sound River Basins





*Based on selected stations

Forecast for spring and summer flows are: 108% for Cedar River near Cedar Falls; 107% for Rex River; 107% for South Fork of the Tolt River; and 118% for Cedar River at Cedar Falls. Basin-wide precipitation for January was 105% of average, bringing water-year-to-date to 125% of average. February 1 average snow cover in Cedar River Basin was 146%, Tolt River Basin was 132%, Snoqualmie River Basin was 121%, and Skykomish River Basin was 118%. Olallie Meadows SNOTEL site, at 3960 feet, had 45.7 inches of water content. Average February 1 water content is 39.2 inches at Olallie Meadows. Temperatures were 2-4 degrees below average for January and for the water-year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CEDAR near Cedar Falls	APR-JUL	59	70	78	107	86	97	73
	APR-SEP	66	78	86	108	94	106	80
REX near Cedar Falls	APR-JUL	18.4	24	27	108	31	36	25
	APR-SEP	21	26	30	107	34	39	28
CEDAR RIVER at Cedar Falls	APR-JUL	57	74	86	116	98	115	74
	APR-SEP	58	75	86	118	97	114	73
SOUTH FORK TOLT near Index	APR-JUL	12.3	14.3	15.6	106	16.9	18.9	14.7
	APR-SEP	14.5	16.6	18.0	107	19.4	22	16.9

CENTRAL PUGET SOUND RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

CENTRAL PUGET SOUND RIVER BASINS
Watershed Snowpack Analysis - February 1, 2007

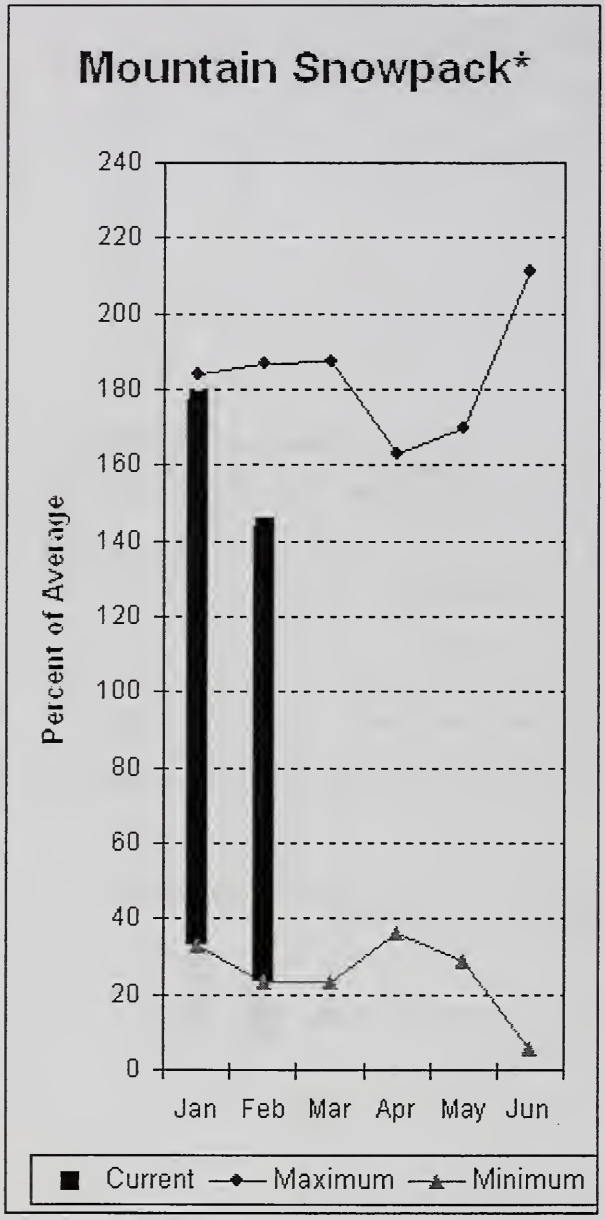
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CEDAR RIVER	4	111	146
TOLT RIVER	2	113	132
SNOQUALMIE RIVER	4	102	121
SKYKOMISH RIVER	2	99	118

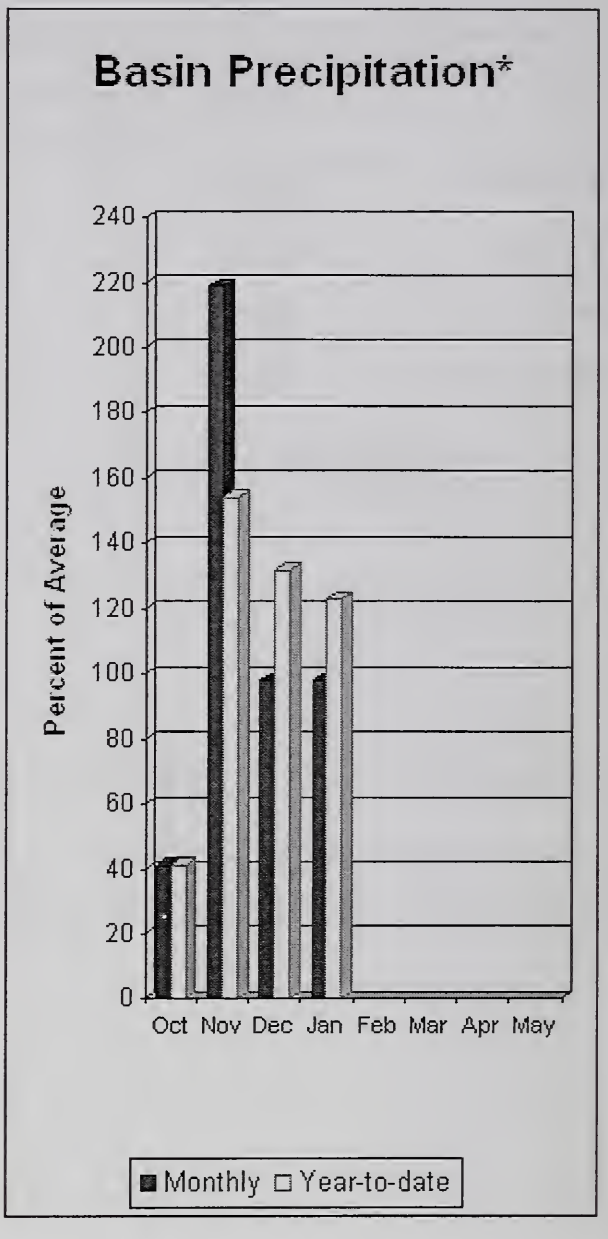
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

North Puget Sound River Basins





*Based on selected stations

Forecast for Skagit River streamflow at Newhalem is 111% of average for the spring and summer period. January streamflow in Skagit River was 55% of average. Other forecast points included Baker River at 117% and Thunder Creek at 105% of average. Basin-wide precipitation for January was 98% of average, bringing water-year-to-date to 123% of average. February 1 average snow cover in Skagit River Basin was 132%, and Nooksack River Basin was 159%. Baker River Basin aerial snow surveys reported 141% normal snowpack. Rainy Pass SNOTEL, at 4,780 feet, had 31.4 inches of water content. Average February 1 water content is 30.2 inches at Rainy Pass. February 1 Skagit River reservoir storage was 105% of average and 75% of capacity. Average temperatures for the basin were slightly below normal for both the month and the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
THUNDER CREEK near Newhalem	APR-JUL	225	240	250	107	260	275	234
	APR-SEP	320	338	350	105	362	380	333
SKAGIT at Newhalem (2)	APR-JUL	1944	2081	2175	117	2269	2406	1864
	APR-SEP	2212	2354	2450	111	2546	2688	2217
BAKER RIVER near Concrete	APR-JUL	835	909	960	116	1011	1085	828
	APR-SEP	1072	1163	1225	117	1287	1378	1050

NORTH PUGET SOUND RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ROSS	1404.1	1031.5	987.6	978.3
DIABLO RESERVOIR	90.6	86.5	85.5	85.5

NORTH PUGET SOUND RIVER BASINS
Watershed Snowpack Analysis - February 1, 2007

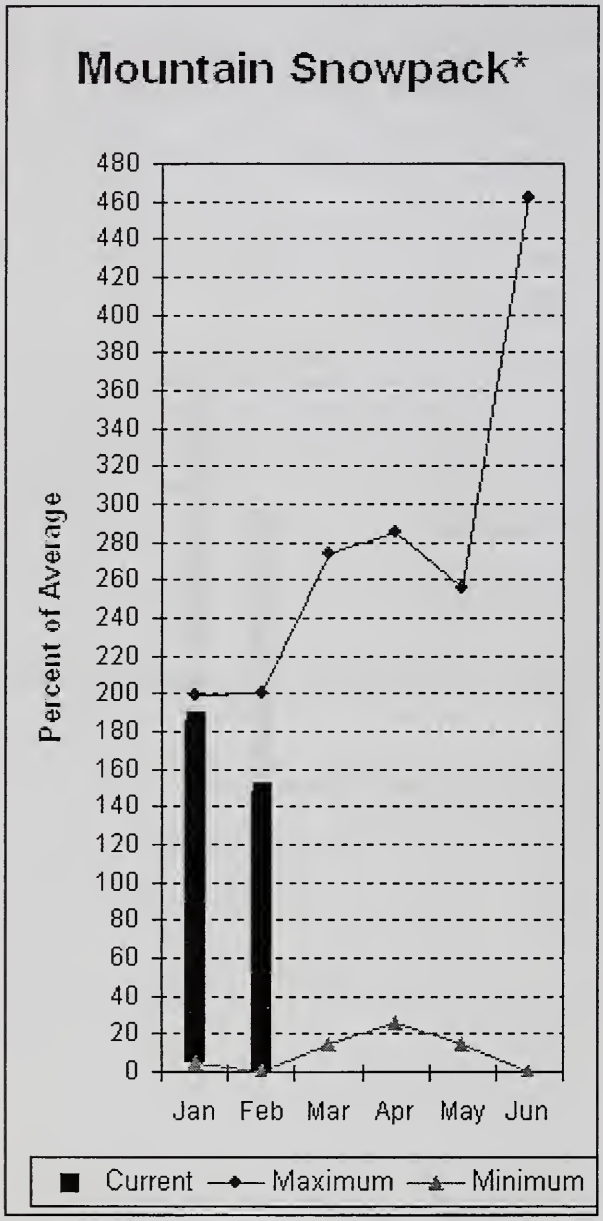
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SKAGIT RIVER	15	124	132
BAKER RIVER	9	141	141
NOOKSACK RIVER	2	127	159

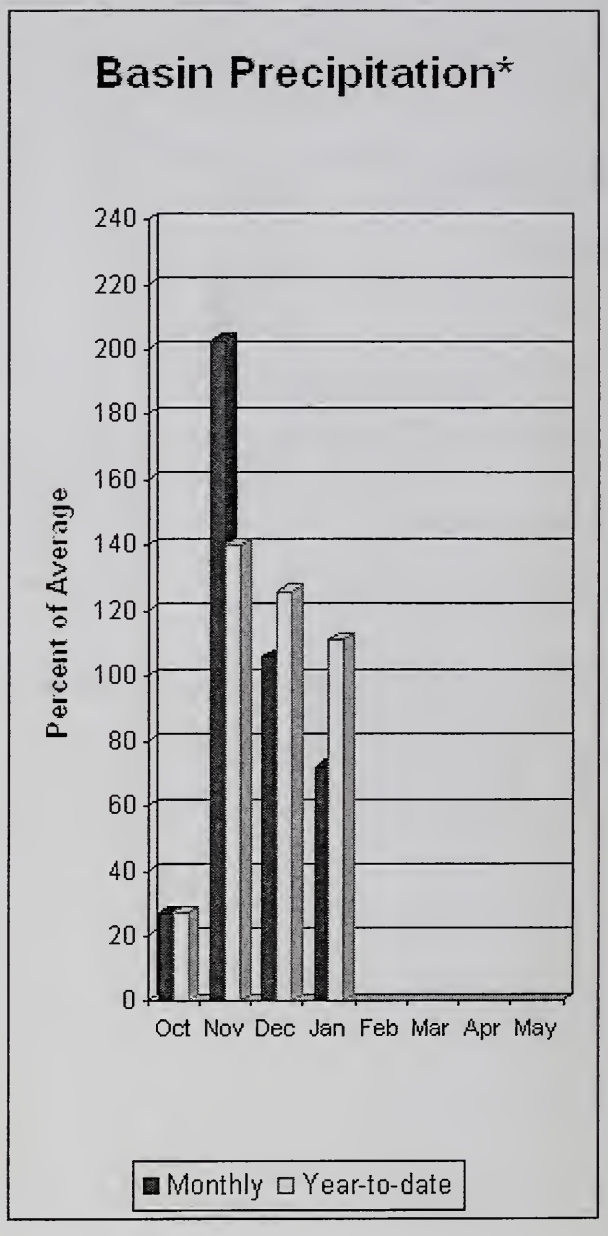
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Olympic Peninsula River Basins





*Based on selected stations

Forecasted average runoff for streamflow for the Dungeness and Elwha rivers is 110% and 103% respectfully. January runoff in the Dungeness River was 60% of normal. Big Quilcene and Wynoochee rivers should expect near average runoff this summer also. January precipitation was 72% of average. Precipitation has accumulated at 111% of average for the water year. January precipitation at Quillayute was 12.91 inches. The thirty-year average for January is 13.65 inches. Olympic Peninsula snowpack averaged 148% of normal on February 1. Temperatures were near average for January and 1 degree above average for the water year.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - February 1, 2007

Forecast Point	Forecast Period	<<======= Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DUNGENESS near Sequim	APR-SEP	150	160	167	110	174	184	152
	APR-JUL	125	133	138	111	143	151	124
ELWHA near Port Angeles	APR-SEP	453	493	520	103	547	587	503
	APR-JUL	383	414	435	104	456	487	419

OLYMPIC PENINSULA RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

OLYMPIC PENINSULA RIVER BASINS
Watershed Snowpack Analysis - February 1, 2007

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
OLYMPIC PENINSULA	5	159	148

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Issued by

Bruce Knight
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Released by

R.L. "Gus" Hughbanks
State Conservationist
Natural Resources Conservation Service
Spokane, Washington

The Following Organizations Cooperate with the Natural Resources Conservation Service in Snow Survey Work*:

Canada

Ministry of Sustainable Resources
Snow Survey, River Forecast Centre, Victoria, British Columbia

State

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal

Department of the Army
    Corps of Engineers
U.S. Department of Agriculture
    Forest Service
U.S. Department of Commerce
    NOAA, National Weather Service
U.S. Department of Interior
    Bonneville Power Administration
    Bureau of Reclamation
    Geological Survey
    National Park Service
    Bureau of Indian Affairs

Local

City of Tacoma
City of Seattle
Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company
Snohomish County P.U.D.
Colville Confederated Tribes
Spokane County
Yakama Indian Nation
Whatcom County
Pierce County

Private

Okanogan Irrigation District
Wenatchee Heights Irrigation District
Newman Lake Homeowners Association
Whitestone Reclamation District

*Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

Washington Snow Survey Office
2021 E. College Way, Suite 214
Mount Vernon, WA 98273-2873

FOR OFFICIAL USE ONLY

Washington Water Supply Outlook Report

Natural Resources Conservation Service
Spokane, WA